

Supplementary Material

Figure S1: Equations for the determination of EC₅₀ in PLA films.

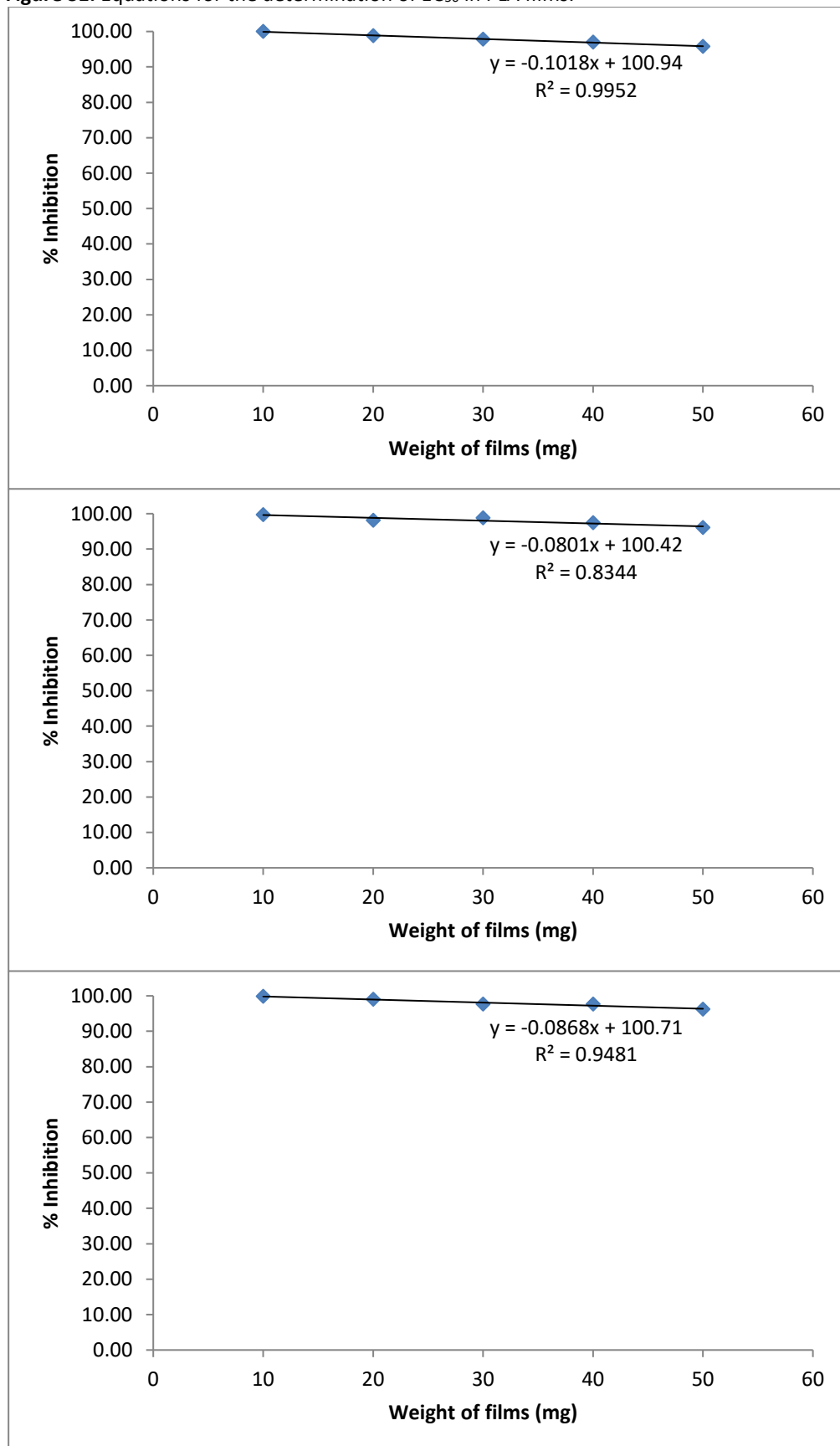


Figure S2: Equations for the determination of EC₅₀ in PLA/TEC0.2 films.

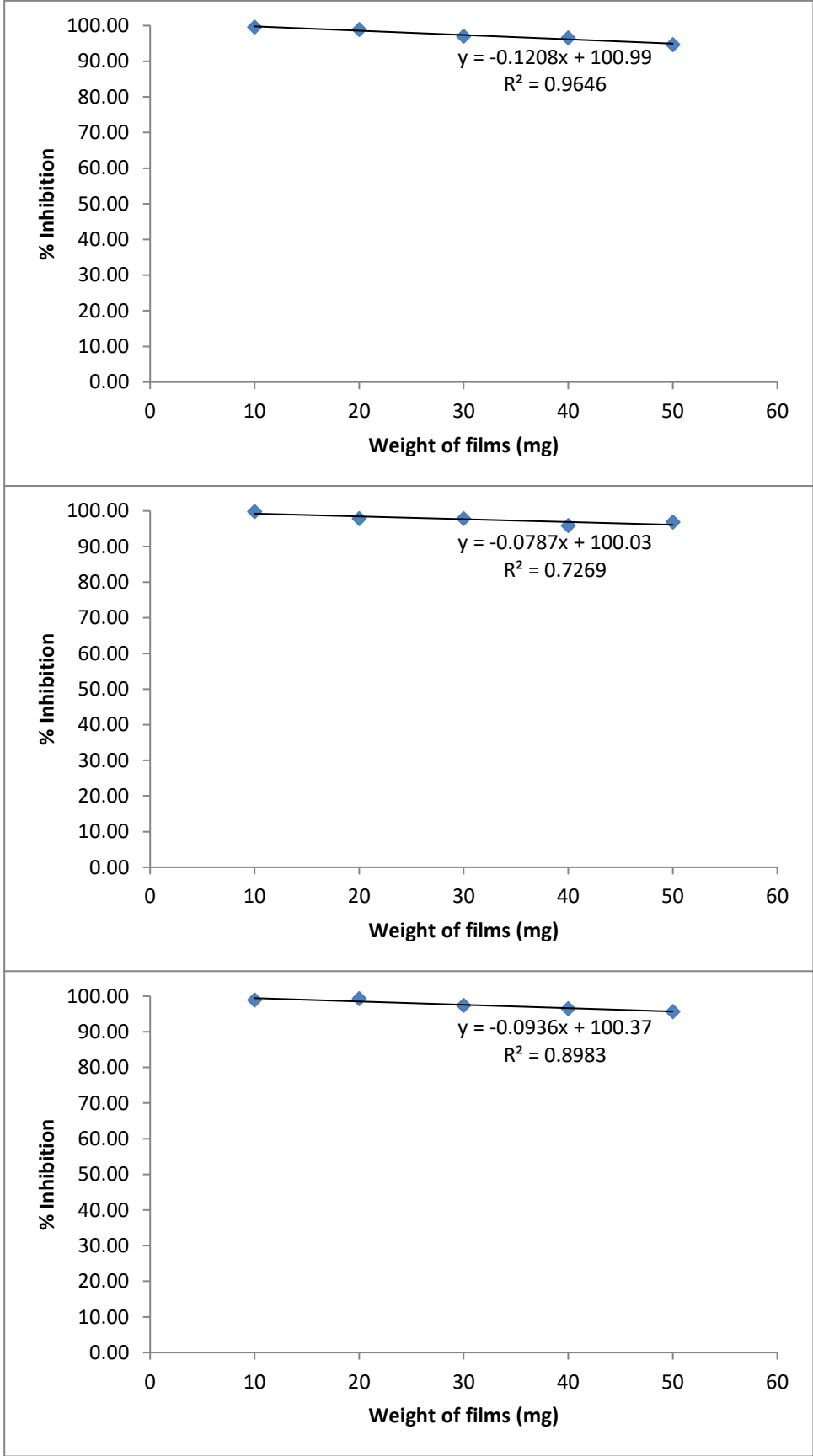


Figure S3: Equations for the determination of EC₅₀ in PLA/TECO.4 films.

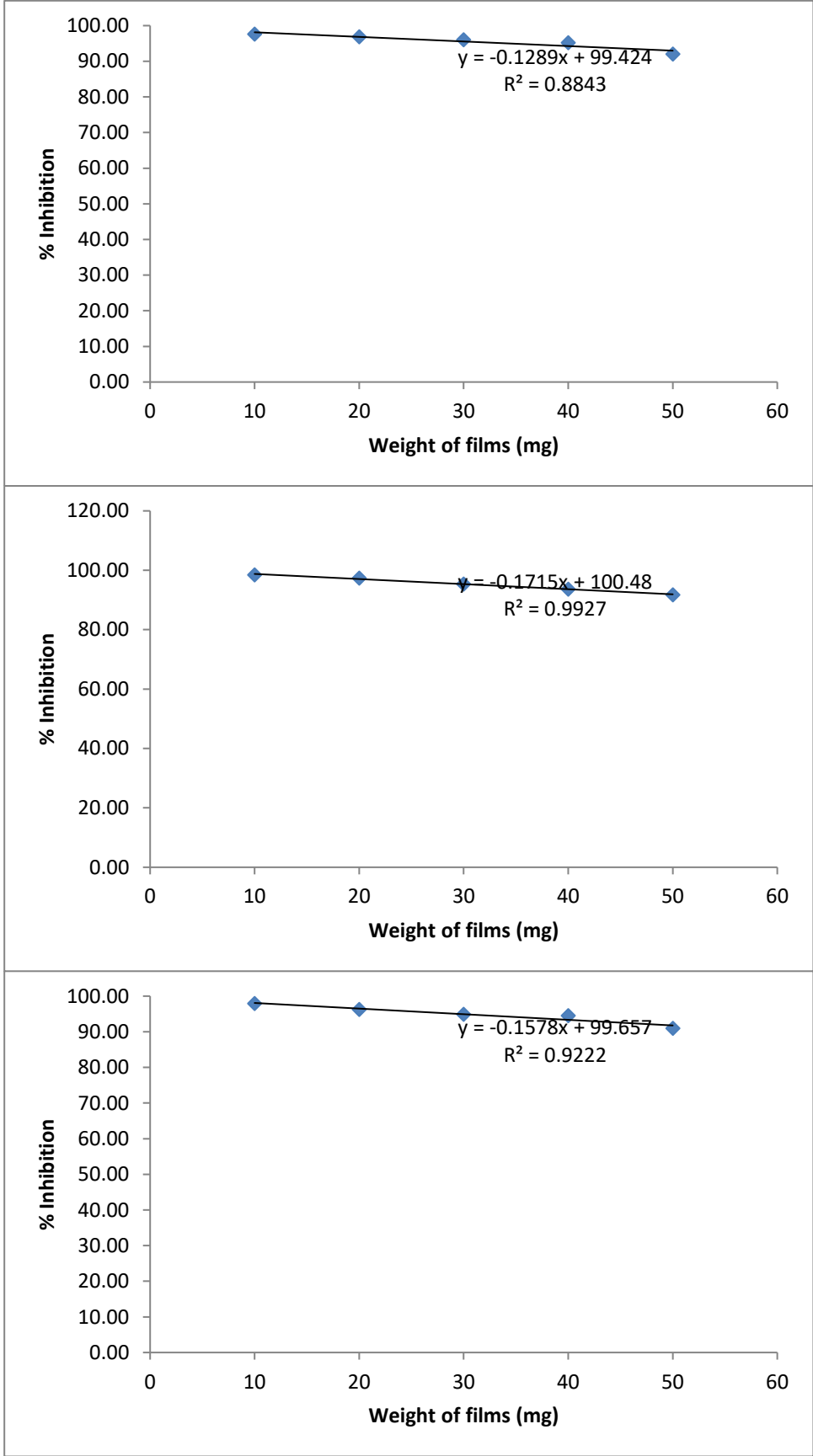


Figure S4: Equations for the determination of EC₅₀ in PLA/TECO.6 films.

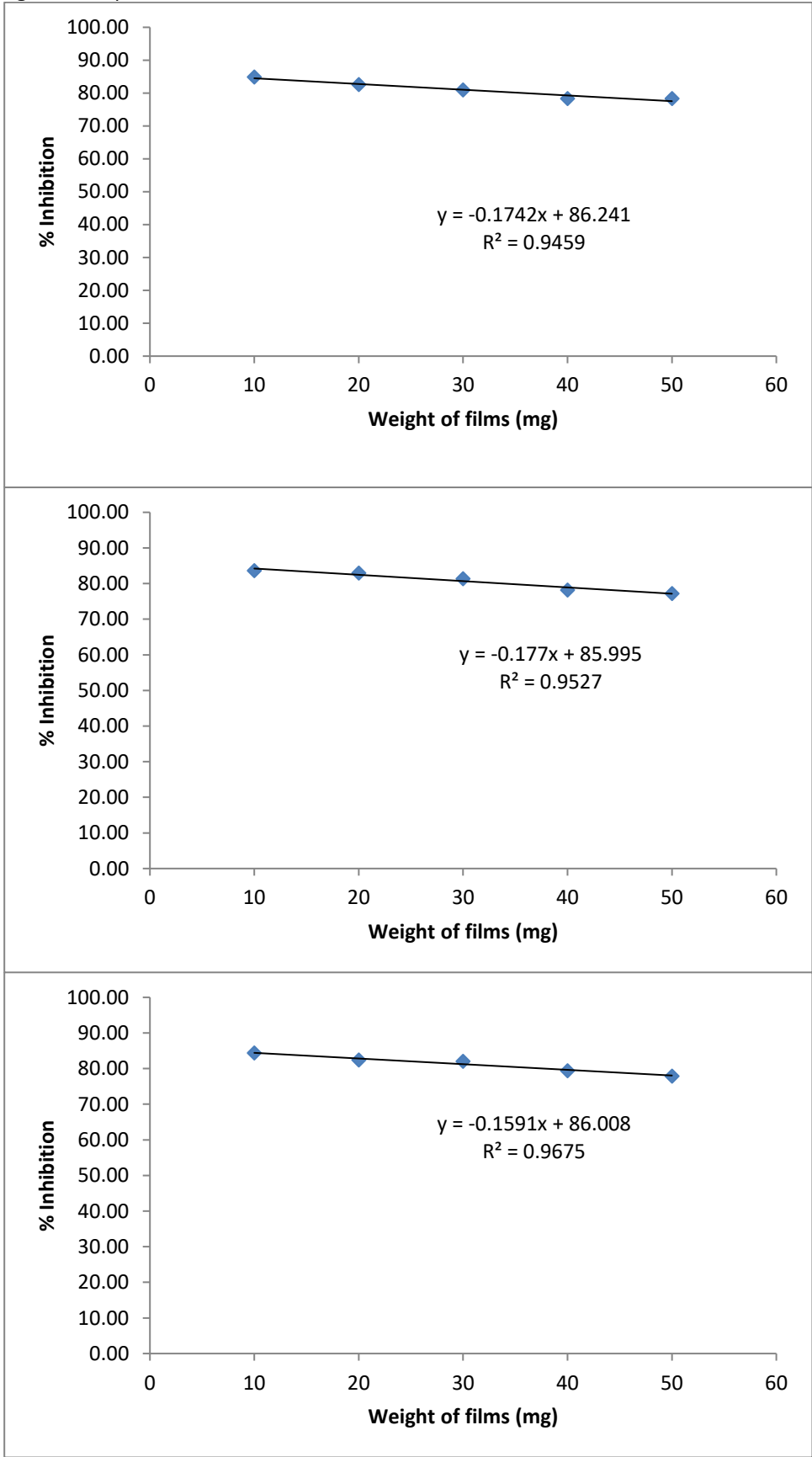


Figure S5: Equations for the determination of EC₅₀ in PLA/TEC0.8 films.

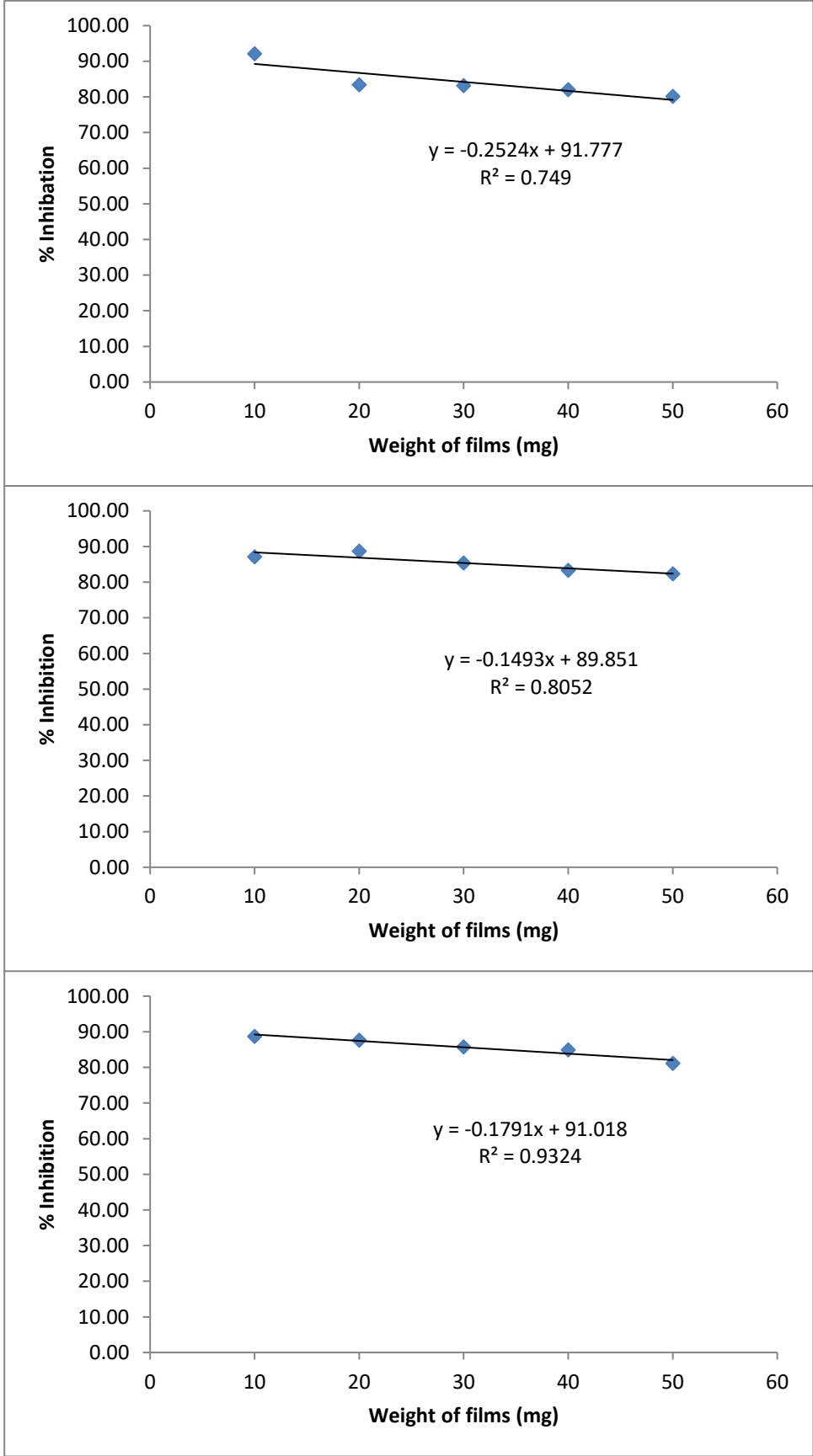


Figure S6: Equations for the determination of EC₅₀ in PLA/TEC1.0 films.

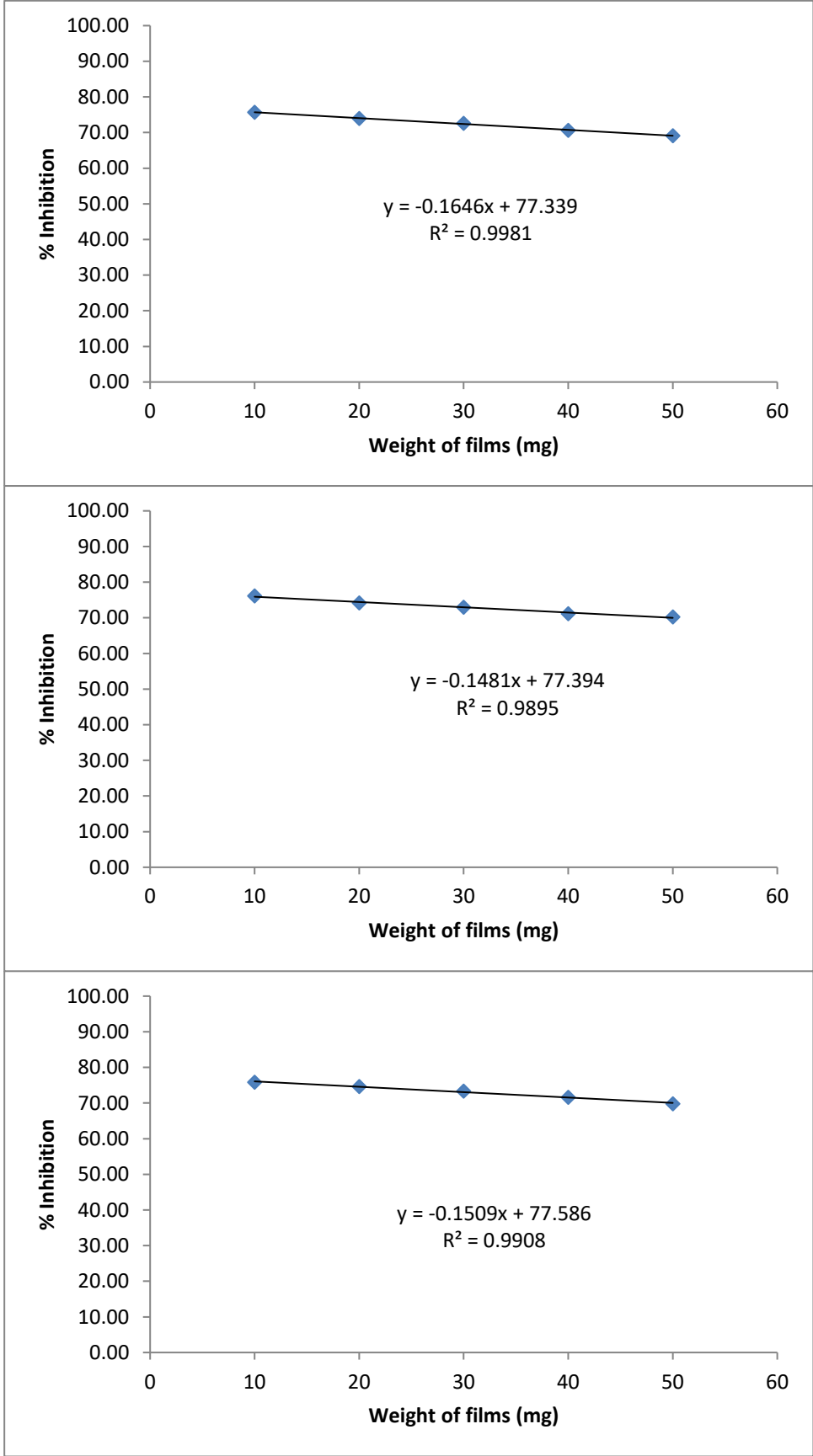


Figure S7: Equations for the determination of EC₅₀ in PLA/TEC1.2 films.

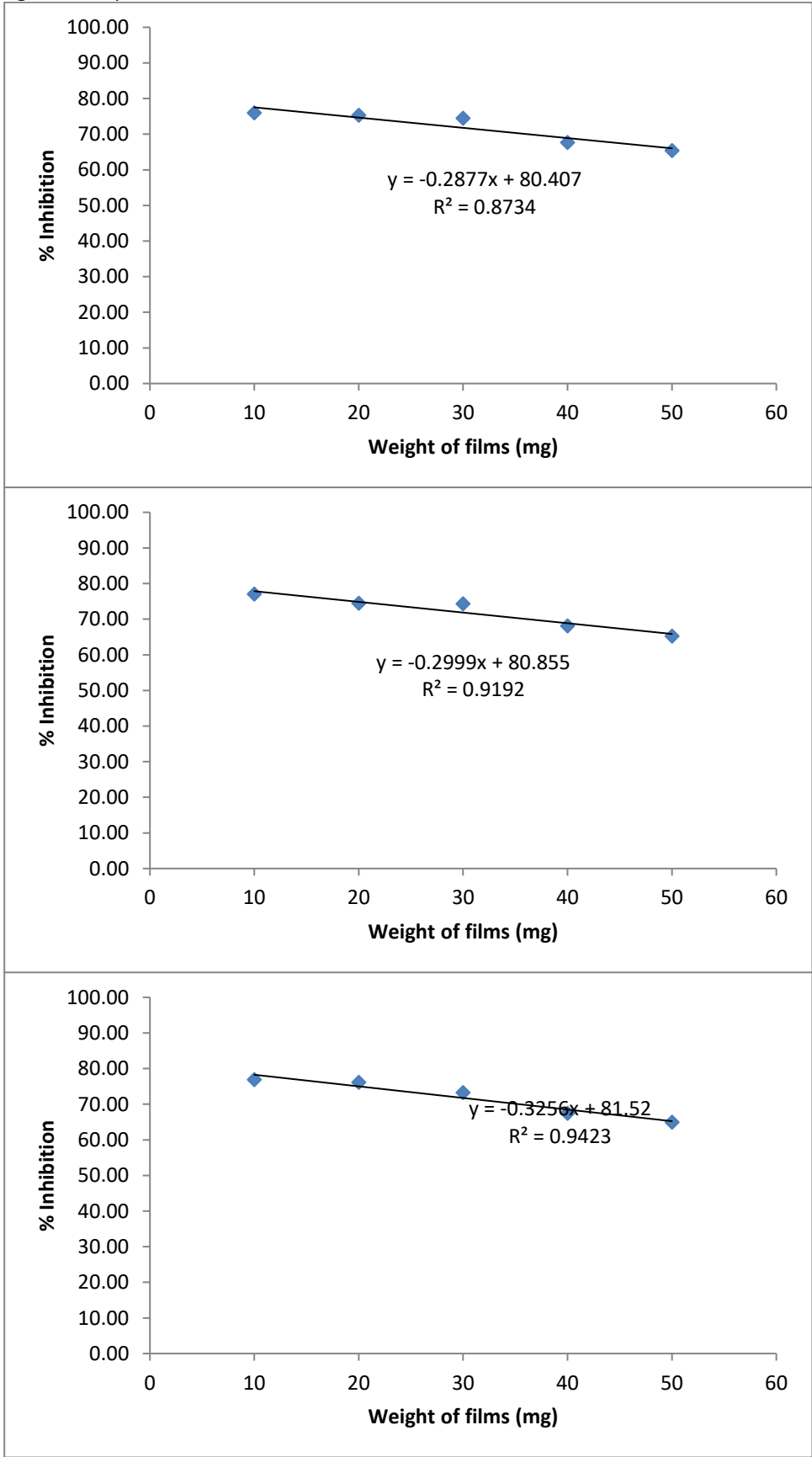


Figure S8. SEM surface images of (a) PLA, (b) PLA/TEC_{0.2}, (c) PLA/TEC_{0.4}, (d) PLA/TEC_{0.6}, (e) PLA/TEC_{0.8}, (f) PLA/TEC_{1.0}, (g) PLA/TEC_{1.2} films.

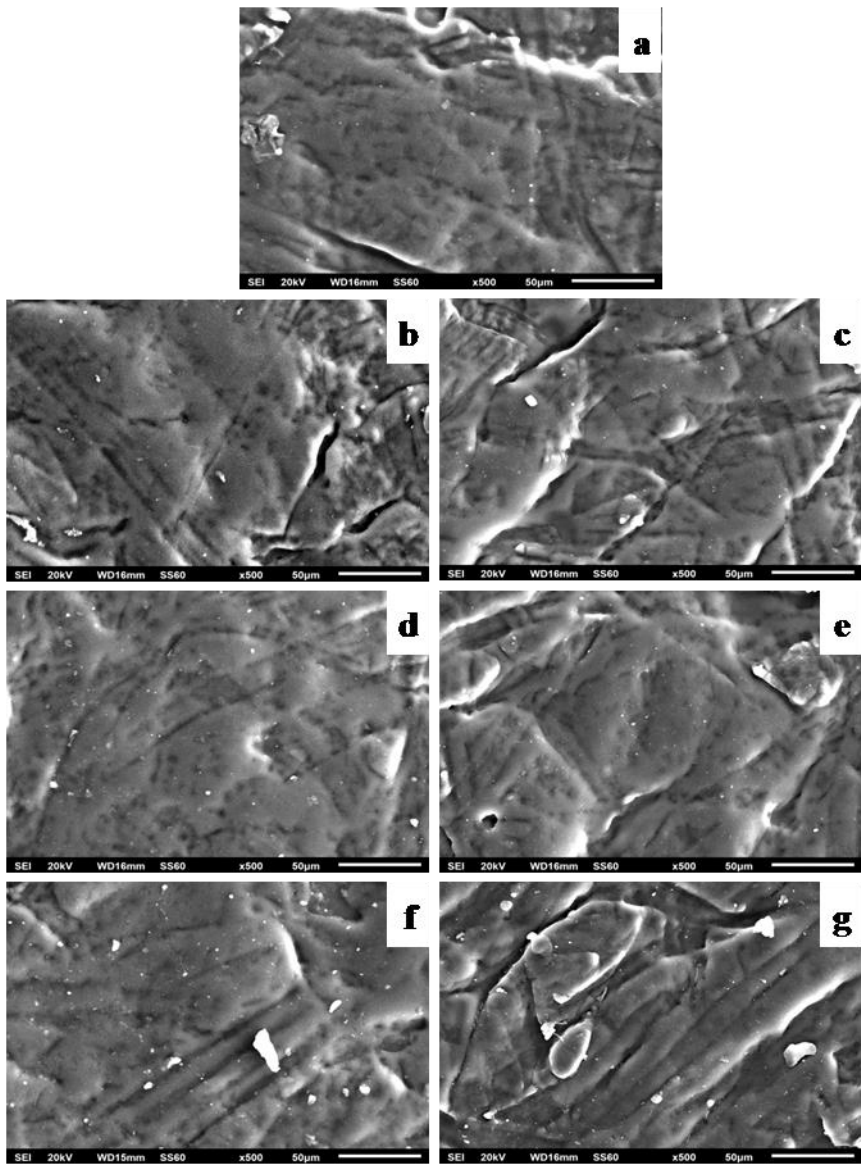


Figure S9. Graphical presentation of Table 2 statistical values.

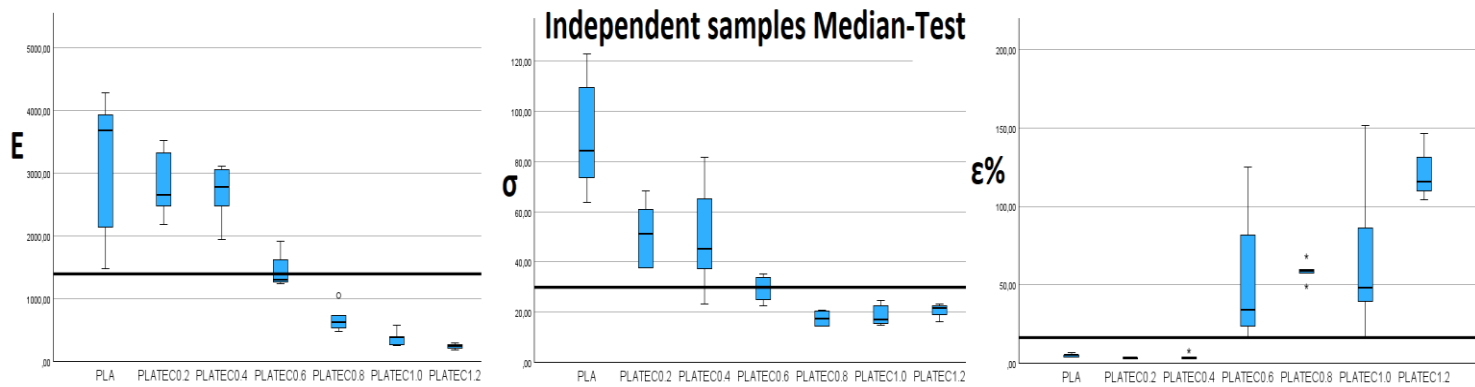


Figure S10. Graphical presentation of descriptive statistics for P_{O2}, and D_{wv} properties.

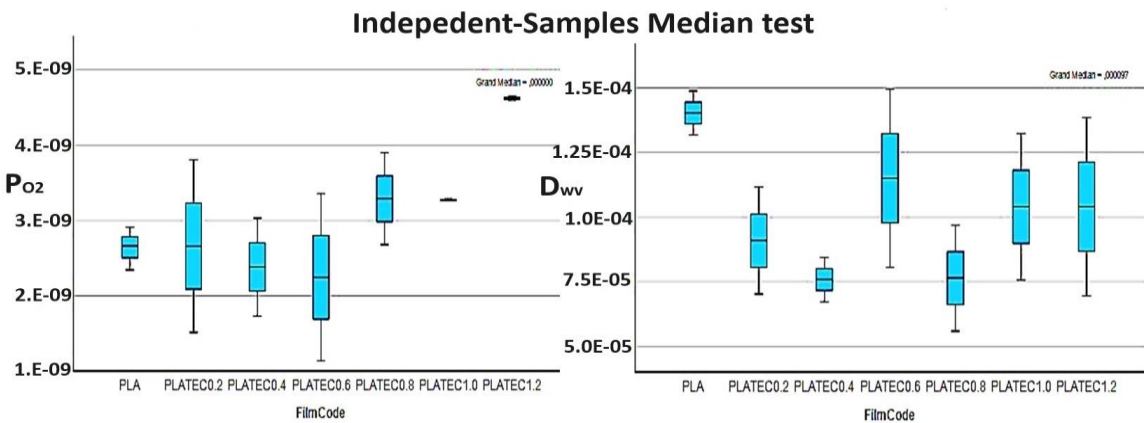


Figure S11. Graphical presentation of descriptive statistics for plasticizer migration (% weight loss), and antioxidant activity (EC₅₀) properties.

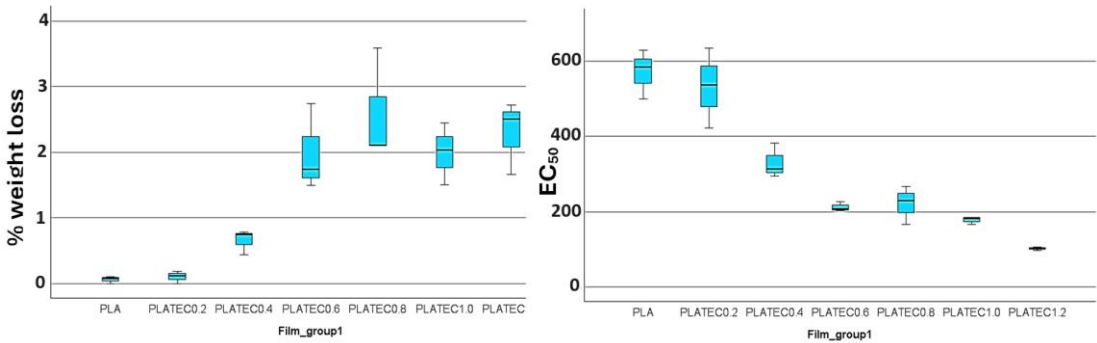


Figure S12. Graphical presentation of descriptive statistics for TBARS and Heme Iron indicators.

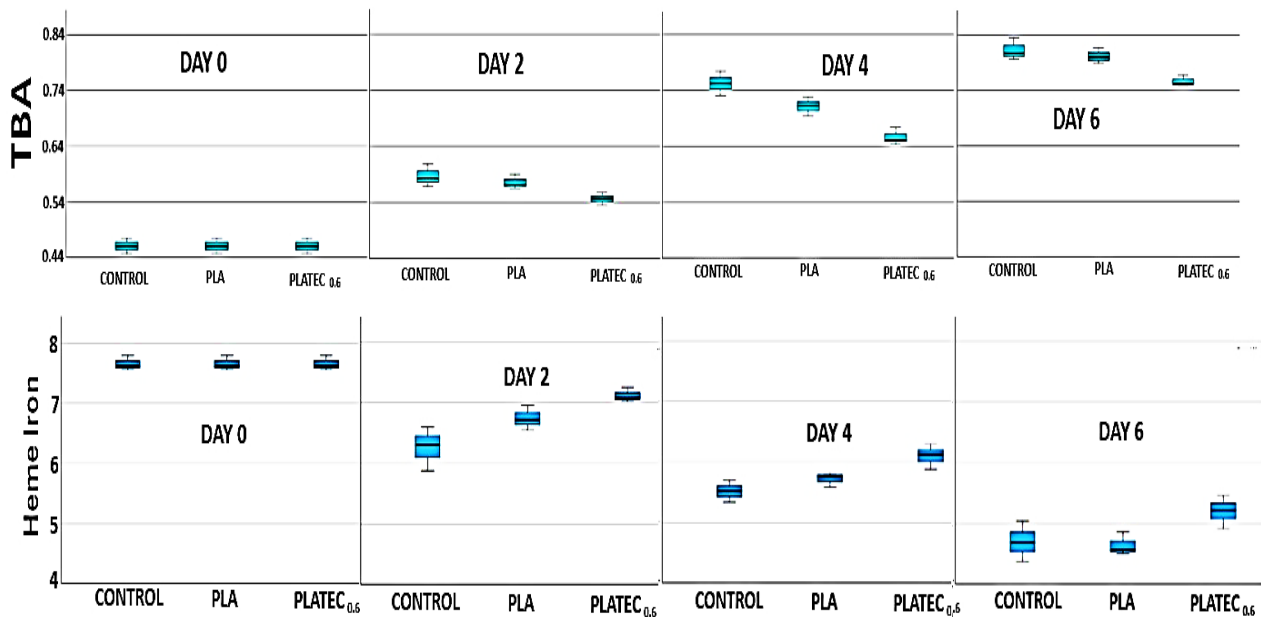


Figure S13. Graphical presentation of descriptive statistics for TVC experimental measurements

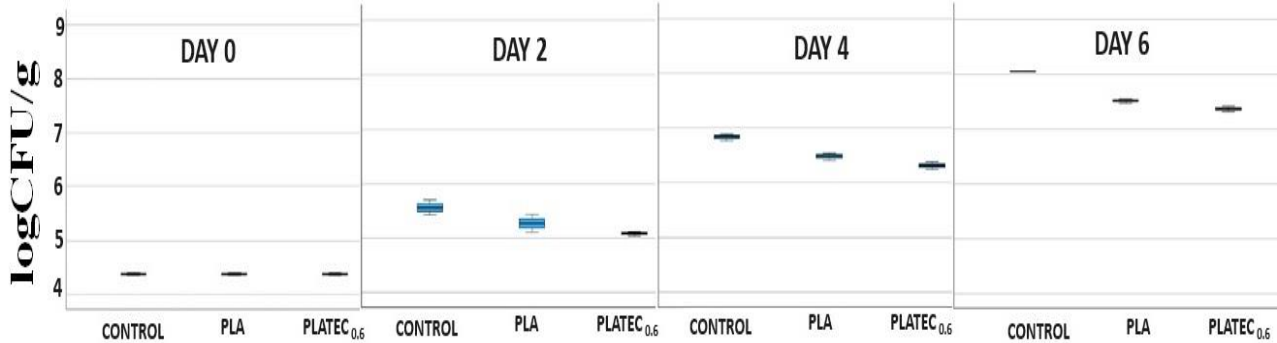


Figure S14. Graphical presentation of descriptive statistics for sensory indicator values.

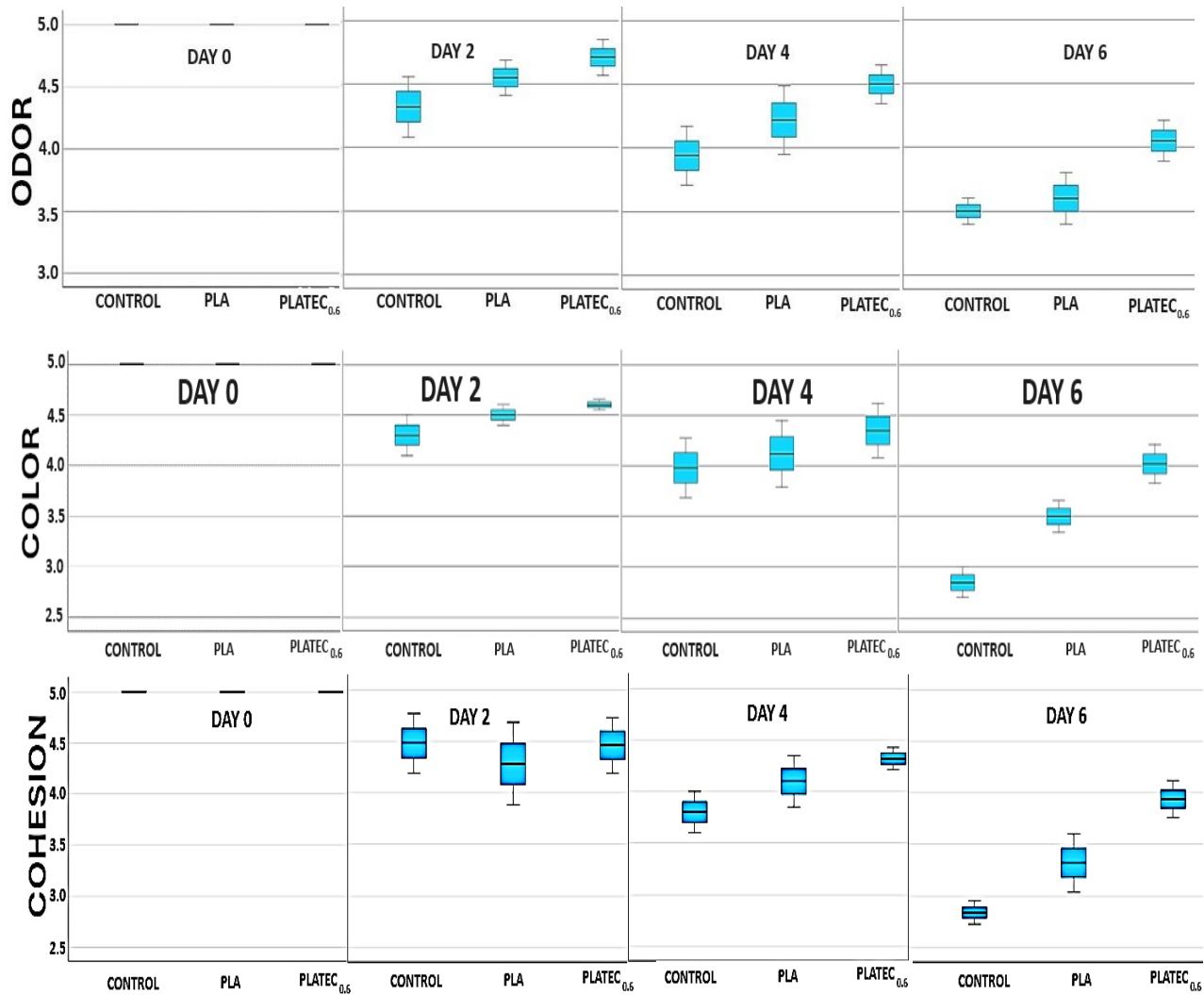


Table S1: Descriptive statistics for Young Modulus (E), Ultimate strength (σ_{uts}), elongation at break ($\epsilon\%$)
Descriptives

	Film_group2			Statistic	Std. Error
E	PLA	Mean		3102.0400	546.42919
		95% Confidence Interval for Mean	Lower Bound	1584.9094	
			Upper Bound	4619.1706	
		5% Trimmed Mean		3126.8778	
		Median		3689.3000	
		Variance		1492924.273	
		Std. Deviation		1221.85280	
		Minimum		1480.00	
		Maximum		4277.00	
		Range		2797.00	
	PLATEC0.2	Interquartile Range		2294.45	
		Skewness		-.635	.913
		Kurtosis		-2.233	2.000
		Mean		2832.5600	252.76117
		95% Confidence Interval for Mean	Lower Bound	2130.7825	
			Upper Bound	3534.3375	
		5% Trimmed Mean		2830.3167	
		Median		2655.1000	
		Variance		319441.033	
		Std. Deviation		565.19115	
	PLATEC0.4	Minimum		2187.00	
		Maximum		3518.50	
		Range		1331.50	
		Interquartile Range		1083.85	
		Skewness		.278	.913
		Kurtosis		-2.279	2.000
		Mean		2675.7800	216.57645
		95% Confidence Interval for Mean	Lower Bound	2074.4674	
			Upper Bound	3277.0926	
		5% Trimmed Mean		2692.2333	
	PLATEC0.6	Median		2785.5000	
		Variance		234526.792	
		Std. Deviation		484.27966	
		Minimum		1939.00	
		Maximum		3116.40	
		Range		1177.40	
		Interquartile Range		881.70	
		Skewness		-.967	.913
		Kurtosis		.099	2.000
		Mean		1438.7500	160.77747
	PLATEC0.8	95% Confidence Interval for Mean	Lower Bound	927.0843	
			Upper Bound	1950.4157	
		5% Trimmed Mean		1423.1667	
		Median		1298.5000	
		Variance		103397.583	
		Std. Deviation		321.55495	
		Minimum		1239.00	
		Maximum		1919.00	
		Range		680.00	
		Interquartile Range		516.25	
	PLATEC1.0	Skewness		1.948	1.014
		Kurtosis		3.835	2.619
		Mean		687.2000	100.91650
		95% Confidence Interval for Mean	Lower Bound	407.0109	
			Upper Bound	967.3891	
		5% Trimmed Mean		678.3333	
		Median		632.0000	
		Variance		50920.700	
		Std. Deviation		225.65615	
		Minimum		482.00	
		Maximum		1052.00	
		Range		570.00	
		Interquartile Range		385.00	
		Skewness		1.317	.913
		Kurtosis		1.658	2.000
	PLATEC1.0	Mean		375.8000	57.79048
		95% Confidence Interval for Mean	Lower Bound	215.3479	
			Upper Bound	536.2521	
		5% Trimmed Mean		371.1667	
		Median		385.0000	
		Variance		16698.700	
		Std. Deviation		129.22345	

	PLATEC1.2	Minimum		258.00	
		Maximum		577.00	
		Range		319.00	
		Interquartile Range		223.00	
		Skewness		1.003	.913
		Kurtosis		.861	2.000
		Mean		239.0000	30.61590
		95% Confidence Interval for Mean	Lower Bound	107.2704	
			Upper Bound	370.7296	
		5% Trimmed Mean		.	
		Median		241.0000	
		Variance		2812.000	
		Std. Deviation		53.02829	
		Minimum		185.00	
		Maximum		291.00	
		Range		106.00	
		Interquartile Range		.	
		Skewness		-.169	1.225
		Kurtosis		.	.
σ	PLA	Mean		90.8920	11.09518
		95% Confidence Interval for Mean	Lower Bound	60.0868	
			Upper Bound	121.6972	
		5% Trimmed Mean		90.6172	
		Median		84.3800	
		Variance		615.515	
		Std. Deviation		24.80958	
		Minimum		63.67	
		Maximum		123.06	
		Range		59.39	
		Interquartile Range		47.62	
		Skewness		.392	.913
		Kurtosis		-1.960	2.000
	PLATEC0.2	Mean		51.1480	6.11492
		95% Confidence Interval for Mean	Lower Bound	34.1703	
			Upper Bound	68.1257	
		5% Trimmed Mean		50.9461	
		Median		51.1600	
		Variance		186.961	
		Std. Deviation		13.67337	
		Minimum		37.63	
		Maximum		68.30	
		Range		30.67	
		Interquartile Range		26.83	
		Skewness		.182	.913
		Kurtosis		-2.273	2.000
	PLATEC0.4	Mean		50.5480	10.32931
		95% Confidence Interval for Mean	Lower Bound	21.8692	
			Upper Bound	79.2268	
		5% Trimmed Mean		50.3433	
		Median		45.2800	
		Variance		533.473	
		Std. Deviation		23.09704	
		Minimum		23.14	
		Maximum		81.64	
		Range		58.50	
		Interquartile Range		43.16	
		Skewness		.346	.913
		Kurtosis		-1.078	2.000
	PLATEC0.6	Mean		29.4250	2.83200
		95% Confidence Interval for Mean	Lower Bound	20.4123	
			Upper Bound	38.4377	
		5% Trimmed Mean		29.4800	
		Median		29.9200	
		Variance		32.081	
		Std. Deviation		5.66401	
		Minimum		22.60	
		Maximum		35.26	
		Range		12.66	
		Interquartile Range		10.87	
		Skewness		-.354	1.014
		Kurtosis		-2.275	2.619
	PLATEC0.8	Mean		17.5180	1.39541
		95% Confidence Interval for Mean	Lower Bound	13.6437	
			Upper Bound	21.3923	
		5% Trimmed Mean		17.5150	
		Median		17.4800	
		Variance		9.736	
		Std. Deviation		3.12023	

		Minimum	14.30	
		Maximum	20.79	
		Range	6.49	
		Interquartile Range	6.23	
		Skewness	.018	.913
		Kurtosis	-2.966	2.000
PLATEC1.0		Mean	18.9300	2.02295
	95% Confidence Interval for Mean	Lower Bound	13.3134	
		Upper Bound	24.5466	
	5% Trimmed Mean		18.8289	
	Median		16.9100	
	Variance		20.462	
	Std. Deviation		4.52345	
	Minimum		14.89	
	Maximum		24.79	
	Range		9.90	
PLATEC1.2		Interquartile Range	8.63	
		Skewness	.609	.913
		Kurtosis	-2.534	2.000
		Mean	20.3967	2.11574
	95% Confidence Interval for Mean	Lower Bound	11.2934	
		Upper Bound	29.4999	
	5% Trimmed Mean		.	
	Median		21.7400	
	Variance		13.429	
	Std. Deviation		3.66456	
		Minimum	16.25	
		Maximum	23.20	
		Range	6.95	
		Interquartile Range	.	
		Skewness	-1.428	1.225
		Kurtosis	.	.
ε	PLA	Mean	5,0460	,44270
		95% Confidence Interval for Mean	Lower Bound	3,8169
			Upper Bound	6,2751
		5% Trimmed Mean	5,0178	
		Median	5,1800	
		Variance	,980	
		Std. Deviation	,98991	
		Minimum	4,09	
		Maximum	6,51	
		Range	2,42	
		Interquartile Range	1,78	
		Skewness	,681	,913
		Kurtosis	-,126	2,000
	PLATEC0.2	Mean	3,4060	,18052
		95% Confidence Interval for Mean	Lower Bound	2,9048
			Upper Bound	3,9072
		5% Trimmed Mean	3,3994	
		Median	3,4200	
		Variance	,163	
		Std. Deviation	,40365	
		Minimum	2,97	
		Maximum	3,96	
		Range	,99	
		Interquartile Range	,77	
		Skewness	,366	,913
		Kurtosis	-1,181	2,000
	PLATEC0.4	Mean	4,0480	,96791
		95% Confidence Interval for Mean	Lower Bound	1,3606
			Upper Bound	6,7354
		5% Trimmed Mean	3,9178	
		Median	3,1800	
		Variance	4,684	
		Std. Deviation	2,16432	
		Minimum	2,62	
		Maximum	7,82	
		Range	5,20	
		Interquartile Range	3,16	
		Skewness	1,969	,913
		Kurtosis	3,963	2,000
	PLATEC0.6	Mean	52,6350	24,46090
		95% Confidence Interval for Mean	Lower Bound	-25,2105
			Upper Bound	130,4805

		5% Trimmed Mean	50,6000	
		Median	34,3200	
		Variance	2393,342	
		Std. Deviation	48,92179	
		Minimum	17,07	
		Maximum	124,83	
		Range	107,76	
		Interquartile Range	82,83	
		Skewness	1,806	1,014
		Kurtosis	3,409	2,619
PLATEC0.8		Mean	58,6800	3,05653
		95% Confidence Interval for Mean	Lower Bound Upper Bound	50,1937 67,1663
		5% Trimmed Mean	58,7000	
		Median	58,8000	
		Variance	46,712	
		Std. Deviation	6,83462	
		Minimum	48,90	
		Maximum	68,10	
		Range	19,20	
		Interquartile Range	10,70	
PLATEC1.0		Mean	68,2520	23,79465
		95% Confidence Interval for Mean	Lower Bound Upper Bound	2,1875 134,3165
		5% Trimmed Mean	66,5311	
		Median	48,0200	
		Variance	2830,927	
		Std. Deviation	53,20646	
		Minimum	15,64	
		Maximum	151,84	
		Range	136,20	
		Interquartile Range	91,57	
PLATEC1.2		Mean	122,2767	12,67994
		95% Confidence Interval for Mean	Lower Bound Upper Bound	67,7193 176,8340
		5% Trimmed Mean	.	
		Median	116,0500	
		Variance	482,343	
		Std. Deviation	21,96230	
		Minimum	104,10	
		Maximum	146,68	
		Range	42,58	
		Interquartile Range	.	
		Skewness	1,173	1,225
		Kurtosis	.	.

Table S2: Overall mean values significant difference hypothesis test using Median Test results for E, σ_{uis} , $\epsilon\%$

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}	Decision
1	The medians of E are the same across categories of Film_group2.	Independent-Samples Median Test	<.001	Reject the null hypothesis.
2	The medians of σ are the same across categories of Film_group2.	Independent-Samples Median Test	<.001	Reject the null hypothesis.
3	The medians of ϵ are the same across categories of Film_group2.	Independent-Samples Median Test	<.001	Reject the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

Table S3: Paiwise mean values significant difference hypothesis test using Median Test results for Young Modulus E
Pairwise Comparisons of Film_group2

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
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PLATEC1.2-PLATEC1.0	.533	.465	1.000
PLATEC1.2-PLATEC0.8	4.800	.028	.598
PLATEC1.2-PLATEC0.6	3.938	.047	.992
PLATEC1.2-PLATEC0.2	4.800	.028	.598
PLATEC1.2-PLATEC0.4	4.800	.028	.598
PLATEC1.2-PLA	4.800	.028	.598
PLATEC1.0-PLATEC0.8	3.600	.058	1.000
PLATEC1.0-PLATEC0.6	9.000	.003	.057
PLATEC1.0-PLATEC0.2	10.000	.002	.033
PLATEC1.0-PLATEC0.4	10.000	.002	.033
PLATEC1.0-PLA	10.000	.002	.033
PLATEC0.8-PLATEC0.6	9.000	.003	.057
PLATEC0.8-PLATEC0.2	10.000	.002	.033
PLATEC0.8-PLATEC0.4	10.000	.002	.033
PLATEC0.8-PLA	10.000	.002	.033
PLATEC0.6-PLATEC0.2	5.760	.016	.344
PLATEC0.6-PLATEC0.4	5.760	.016	.344
PLATEC0.6-PLA	5.760	.016	.344
PLATEC0.2-PLATEC0.4	.400	.527	1.000
PLATEC0.2-PLA	.400	.527	1.000
PLATEC0.4-PLA	.400	.527	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S4: Pairwise mean values significant difference hypothesis test using Median Test results for Ultimate Strength σ_{uts} .

Pairwise Comparisons of Film_group2

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC1.0-PLATEC0.8	.400	.527	1.000
PLATEC1.0-PLATEC1.2	.533	.465	1.000
PLATEC1.0-PLATEC0.6	2.723	.099	1.000
PLATEC1.0-PLATEC0.4	3.600	.058	1.000
PLATEC1.0-PLATEC0.2	10.000	.002	.033
PLATEC1.0-PLA	10.000	.002	.033
PLATEC0.8-PLATEC1.2	.533	.465	1.000
PLATEC0.8-PLATEC0.6	9.000	.003	.057
PLATEC0.8-PLATEC0.4	10.000	.002	.033
PLATEC0.8-PLATEC0.2	10.000	.002	.033
PLATEC0.8-PLA	10.000	.002	.033
PLATEC1.2-PLATEC0.6	3.938	.047	.992
PLATEC1.2-PLATEC0.4	4.800	.028	.598
PLATEC1.2-PLATEC0.2	4.800	.028	.598
PLATEC1.2-PLA	4.800	.028	.598
PLATEC0.6-PLATEC0.4	5.760	.016	.344
PLATEC0.6-PLATEC0.2	5.760	.016	.344
PLATEC0.6-PLA	5.760	.016	.344
PLATEC0.4-PLATEC0.2	.400	.527	1.000
PLATEC0.4-PLA	3.600	.058	1.000
PLATEC0.2-PLA	3.600	.058	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S5: Pairwise mean values significant difference hypothesis test using Median Test results for elongation at break $\epsilon\%$.

Pairwise Comparisons of Film_group2

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.4-PLATEC0.2	.400	.527	1.000
PLATEC0.4-PLA	3.600	.058	1.000
PLATEC0.4-PLATEC0.6	9.000	.003	.057
PLATEC0.4-PLATEC1.0	10.000	.002	.033
PLATEC0.4-PLATEC0.8	10.000	.002	.033
PLATEC0.4-PLATEC1.2	4.800	.028	.598
PLATEC0.2-PLA	10.000	.002	.033
PLATEC0.2-PLATEC0.6	9.000	.003	.057
PLATEC0.2-PLATEC1.0	10.000	.002	.033
PLATEC0.2-PLATEC0.8	10.000	.002	.033
PLATEC0.2-PLATEC1.2	4.800	.028	.598
PLA-PLATEC0.6	9.000	.003	.057
PLA-PLATEC1.0	10.000	.002	.033

PLA-PLATEC0.8	10,000	,002	,033
PLA-PLATEC1.2	4,800	,028	,598
PLATEC0.6-PLATEC1.0	1,103	,294	1,000
PLATEC0.6-PLATEC0.8	1,103	,294	1,000
PLATEC0.6-PLATEC1.2	1,215	,270	1,000
PLATEC1.0-PLATEC0.8	,400	,527	1,000
PLATEC1.0-PLATEC1.2	4,800	,028	,598
PLATEC0.8-PLATEC1.2	4,800	,028	,598

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is ,050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S6: Descriptive statistics for Oxygen Permeability Coefficient (P_{O_2}), Water/Vapor Diffusion Coefficient (D_{wv}), EC_{50} , % weight loss
Descriptives^{a,b,c,d}

Film_group1		Statistic		Std. Error
PeO2	PLA	Mean		2.6381467e-009
		95% Confidence Interval for Mean	Lower Bound	1.9366769e-009
			Upper Bound	3.3396164e-009
		5% Trimmed Mean		.
		Median		2.6625900e-009
		Variance		.000
		Std. Deviation		2.82379567e-010
		Minimum		2.34434e-009
		Maximum		2.90751e-009
		Range		5.63170e-010
		Interquartile Range		.
		Skewness		-.387
		Kurtosis		.
	PLATEC0.2	Mean		2.6586533e-009
		95% Confidence Interval for Mean	Lower Bound	-1.8542351e-010
			Upper Bound	5.5027302e-009
		5% Trimmed Mean		.
		Median		2.6586500e-009
		Variance		.000
		Std. Deviation		1.14489500e-009
		Minimum		1.51376e-009
		Maximum		3.80355e-009
		Range		2.28979e-009
		Interquartile Range		.
		Skewness		.000
		Kurtosis		.
	PLATEC0.4	Mean		2.3816233e-009
		95% Confidence Interval for Mean	Lower Bound	7.7156674e-010
			Upper Bound	3.9916799e-009
		5% Trimmed Mean		.
		Median		2.3816200e-009
		Variance		.000
		Std. Deviation		6.48135000e-010
		Minimum		1.73349e-009
		Maximum		3.02976e-009
		Range		1.29627e-009
		Interquartile Range		.
		Skewness		.000
		Kurtosis		.
	PLATEC0.6	Mean		2.2438933e-009
		95% Confidence Interval for Mean	Lower Bound	-5.0928891e-010
			Upper Bound	4.9970756e-009
		5% Trimmed Mean		.
		Median		2.2438900e-009
		Variance		.000
		Std. Deviation		1.10830500e-009
		Minimum		1.13559e-009
		Maximum		3.35220e-009
		Range		2.21661e-009
		Interquartile Range		.
		Skewness		.000
		Kurtosis		.
	PLATEC0.8	Mean		3.2882400e-009
		95% Confidence Interval for Mean	Lower Bound	1.7768409e-009
			Upper Bound	4.7996391e-009

		5% Trimmed Mean		.	
		Median		3.2882400e-009	
		Variance		.000	
		Std. Deviation		6.08420000e-010	
		Minimum		2.67982e-009	
		Maximum		3.89666e-009	
		Range		1.21684e-009	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	
	PLATEC1.0	Mean		3.2711200e-009	8.74108308e-012
		95% Confidence Interval for Mean	Lower Bound	3.2335102e-009	
			Upper Bound	3.3087298e-009	
		5% Trimmed Mean		.	
		Median		3.2711200e-009	
		Variance		.000	
		Std. Deviation		1.51400000e-011	
		Minimum		3.25598e-009	
		Maximum		3.28626e-009	
		Range		3.02800e-011	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	
	PLATEC1.2	Mean		4.6219733e-009	1.53201418e-011
		95% Confidence Interval for Mean	Lower Bound	4.5560561e-009	
			Upper Bound	4.6878906e-009	
		5% Trimmed Mean		.	
		Median		4.6221100e-009	
		Variance		.000	
		Std. Deviation		2.65352640e-011	
		Minimum		4.59537e-009	
		Maximum		4.64844e-009	
		Range		5.30700e-011	
		Interquartile Range		.	
		Skewness		-.023	1.225
		Kurtosis		.	
Dwv	PLA	Mean		1.4030000e-004	4.90747729e-006
		95% Confidence Interval for Mean	Lower Bound	1.1918483e-004	
			Upper Bound	1.6141517e-004	
		5% Trimmed Mean		.	
		Median		1.4030000e-004	
		Variance		.000	
		Std. Deviation		8.50000000e-006	
		Minimum		1.31800e-004	
		Maximum		1.48800e-004	
		Range		1.70000e-005	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	
	PLATEC0.2	Mean		9.0900000e-005	1.19511506e-005
		95% Confidence Interval for Mean	Lower Bound	3.9478349e-005	
			Upper Bound	1.4232165e-004	
		5% Trimmed Mean		.	
		Median		9.0900000e-005	
		Variance		.000	
		Std. Deviation		2.07000000e-005	
		Minimum		7.02000e-005	
		Maximum		1.11600e-004	
		Range		4.14000e-005	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	
	PLATEC0.4	Mean		7.5800000e-005	4.96521232e-006
		95% Confidence Interval for Mean	Lower Bound	5.4436416e-005	
			Upper Bound	9.7163584e-005	
		5% Trimmed Mean		.	
		Median		7.5800000e-005	
		Variance		.000	
		Std. Deviation		8.60000000e-006	
		Minimum		6.72000e-005	
		Maximum		8.44000e-005	

EC50	PLA		Range		1.72000e-005	
			Interquartile Range		.	
			Skewness		.000	1.225
			Kurtosis		.	.
			Mean		1.1500000e-004	1.99185843e-005
			95% Confidence Interval for Mean	Lower Bound	2.9297249e-005	
				Upper Bound	2.0070275e-004	
			5% Trimmed Mean		.	
			Median		1.1500000e-004	
			Variance		.000	
			Std. Deviation		3.4500000e-005	
			Minimum		8.05000e-005	
			Maximum		1.49500e-004	
			Range		6.90000e-005	
			Interquartile Range		.	
			Skewness		.000	1.225
			Kurtosis		.	.
			Mean		7.6400000e-005	1.18356805e-005
			95% Confidence Interval for Mean	Lower Bound	2.5475177e-005	
				Upper Bound	1.2732482e-004	
			5% Trimmed Mean		.	
			Median		7.6400000e-005	
			Variance		.000	
			Std. Deviation		2.0500000e-005	
			Minimum		5.59000e-005	
			Maximum		9.69000e-005	
			Range		4.10000e-005	
			Interquartile Range		.	
			Skewness		.000	1.225
			Kurtosis		.	.
EC50	PLA		Mean		1.0400000e-004	1.63967476e-005
			95% Confidence Interval for Mean	Lower Bound	3.3450489e-005	
				Upper Bound	1.7454951e-004	
			5% Trimmed Mean		.	
			Median		1.0400000e-004	
			Variance		.000	
			Std. Deviation		2.8400000e-005	
			Minimum		7.56000e-005	
			Maximum		1.32400e-004	
			Range		5.68000e-005	
			Interquartile Range		.	
			Skewness		.000	1.225
			Kurtosis		.	.
			Mean		1.0400000e-004	1.99185843e-005
			95% Confidence Interval for Mean	Lower Bound	1.8297249e-005	
				Upper Bound	1.8970275e-004	
			5% Trimmed Mean		.	
			Median		1.0400000e-004	
			Variance		.000	
			Std. Deviation		3.4500000e-005	
			Minimum		6.95000e-005	
			Maximum		1.38500e-004	
			Range		6.90000e-005	
			Interquartile Range		.	
			Skewness		.000	1.225
			Kurtosis		.	.
			Mean		571.3567	37.81034
			95% Confidence Interval for Mean	Lower Bound	408.6719	
				Upper Bound	734.0414	
			5% Trimmed Mean		.	
			Median		584.2200	
			Variance		4288.865	
			Std. Deviation		65.48943	
			Minimum		500.39	
			Maximum		629.46	
			Range		129.07	
			Interquartile Range		.	
			Skewness		-.850	1.225
			Kurtosis		.	.
	PLATEC0.2		Mean		531.9833	61.74068
			95% Confidence Interval for Mean	Lower Bound	266.3346	

		Upper Bound	797.6321	
		5% Trimmed Mean	.	
		Median	538.1400	
		Variance	11435.736	
		Std. Deviation	106.93800	
		Minimum	422.10	
		Maximum	635.71	
		Range	213.61	
		Interquartile Range	.	
		Skewness	-.258	1.225
		Kurtosis	.	.
	PLATEC0.4	Mean	330.8167	26.95398
		95% Confidence Interval for Mean	Lower Bound	214.8431
			Upper Bound	446.7903
		5% Trimmed Mean	.	
		Median	314.6800	
		Variance	2179.551	
		Std. Deviation	46.68566	
		Minimum	294.34	
		Maximum	383.43	
		Range	89.09	
		Interquartile Range	.	
		Skewness	1.370	1.225
		Kurtosis	.	.
	PLATEC0.6	Mean	212.5733	7.00485
		95% Confidence Interval for Mean	Lower Bound	182.4339
			Upper Bound	242.7128
		5% Trimmed Mean	.	
		Median	208.0400	
		Variance	147.204	
		Std. Deviation	12.13275	
		Minimum	203.36	
		Maximum	226.32	
		Range	22.96	
		Interquartile Range	.	
		Skewness	1.447	1.225
		Kurtosis	.	.
	PLATEC0.8	Mean	220.4867	29.58098
		95% Confidence Interval for Mean	Lower Bound	93.2100
			Upper Bound	347.7634
		5% Trimmed Mean	.	
		Median	229.0200	
		Variance	2625.103	
		Std. Deviation	51.23576	
		Minimum	165.52	
		Maximum	266.92	
		Range	101.40	
		Interquartile Range	.	
		Skewness	-.729	1.225
		Kurtosis	.	.
	PLATEC1.0	Mean	177.9567	5.96601
		95% Confidence Interval for Mean	Lower Bound	152.2870
			Upper Bound	203.6263
		5% Trimmed Mean	.	
		Median	182.8100	
		Variance	106.780	
		Std. Deviation	10.33343	
		Minimum	166.09	
		Maximum	184.97	
		Range	18.88	
		Interquartile Range	.	
		Skewness	-1.647	1.225
		Kurtosis	.	.
	PLATEC1.2	Mean	101.7933	2.62038
		95% Confidence Interval for Mean	Lower Bound	90.5187
			Upper Bound	113.0679
		5% Trimmed Mean	.	
		Median	102.8800	
		Variance	20.599	
		Std. Deviation	4.53864	
		Minimum	96.81	

W.L	PLA	Maximum		105.69	
		Range		8.88	
		Interquartile Range		.	
		Skewness		-1.016	1.225
		Kurtosis		.	.
		Mean		.0600	.03055
		95% Confidence Interval for Mean	Lower Bound	-.0714	
			Upper Bound	.1914	
		5% Trimmed Mean		.	
		Median		.0800	
		Variance		.003	
		Std. Deviation		.05292	
		Minimum		.00	
		Maximum		.10	
		Range		.10	
		Interquartile Range		.	
		Skewness		-1.458	1.225
		Kurtosis		.	.
	PLATEC0.2	Mean		.1033	.05548
		95% Confidence Interval for Mean	Lower Bound	-.1354	
			Upper Bound	.3420	
		5% Trimmed Mean		.	
		Median		.1200	
		Variance		.009	
		Std. Deviation		.09609	
		Minimum		.00	
		Maximum		.19	
		Range		.19	
		Interquartile Range		.	
		Skewness		-.757	1.225
		Kurtosis		.	.
	PLATEC0.4	Mean		.6567	.10868
		95% Confidence Interval for Mean	Lower Bound	.1891	
			Upper Bound	1.1243	
		5% Trimmed Mean		.	
		Median		.7500	
		Variance		.035	
		Std. Deviation		.18824	
		Minimum		.44	
		Maximum		.78	
		Range		.34	
		Interquartile Range		.	
		Skewness		-1.683	1.225
		Kurtosis		.	.
	PLATEC0.6	Mean		1.9900	.38188
		95% Confidence Interval for Mean	Lower Bound	.3469	
			Upper Bound	3.6331	
		5% Trimmed Mean		.	
		Median		1.7400	
		Variance		.438	
		Std. Deviation		.66144	
		Minimum		1.49	
		Maximum		2.74	
		Range		1.25	
		Interquartile Range		.	
		Skewness		1.458	1.225
		Kurtosis		.	.
	PLATEC0.8	Mean		2.6000	.49501
		95% Confidence Interval for Mean	Lower Bound	.4702	
			Upper Bound	4.7298	
		5% Trimmed Mean		.	
		Median		2.1100	
		Variance		.735	
		Std. Deviation		.85738	
		Minimum		2.10	
		Maximum		3.59	
		Range		1.49	
		Interquartile Range		.	
		Skewness		1.732	1.225
		Kurtosis		.	.
	PLATEC1.0	Mean		1.9967	.27187

PLATEC1.2	95% Confidence Interval for Mean	Lower Bound	.8269	
		Upper Bound	3.1664	
	5% Trimmed Mean		.	
	Median		2.0300	
	Variance		.222	
	Std. Deviation		.47089	
	Minimum		1.51	
	Maximum		2.45	
	Range		.94	
	Interquartile Range		.	
	Skewness		-.317	1.225
	Kurtosis		.	.
	Mean		2.2933	.32297
	95% Confidence Interval for Mean	Lower Bound	.9037	
		Upper Bound	3.6830	
	5% Trimmed Mean		.	
	Median		2.5000	
	Variance		.313	
	Std. Deviation		.55940	
	Minimum		1.66	
	Maximum		2.72	
	Range		1.06	
	Interquartile Range		.	
	Skewness		-1.436	1.225
	Kurtosis		.	.

- a. There are no valid cases for PeO2 when Film_group1 = .. Statistics cannot be computed for this level.
b. There are no valid cases for Dwv when Film_group1 = .. Statistics cannot be computed for this level.
c. There are no valid cases for EC50 when Film_group1 = .. Statistics cannot be computed for this level.
d. There are no valid cases for W.L when Film_group1 = .. Statistics cannot be computed for this level.

Table S7: Overall mean values significant difference hypothesis test using Median Test results for E, σ_{uis} , $\epsilon\%$

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.a.b	Decision
1	The medians of PeO2 are the same across categories of Film_group1.	Independent-Samples Median Test	.043	Reject the null hypothesis.
2	The medians of Dwv are the same across categories of Film_group1.	Independent-Samples Median Test	.112	Retain the null hypothesis.
3	The medians of EC50 are the same across categories of Film_group1.	Independent-Samples Median Test	.005	Reject the null hypothesis.
4	The medians of W.L are the same across categories of Film_group1.	Independent-Samples Median Test	.016	Reject the null hypothesis.

- a. The significance level is .050.
b. Asymptotic significance is displayed.

Table S8: Pairwise mean values significant difference hypothesis test using Median Test results for P_{O2}.

Pairwise Comparisons of Film_group1

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.6-PLATEC0.4	.667	.414	1.000
PLATEC0.6-PLATEC0.2	.667	.414	1.000
PLATEC0.6-PLA	.667	.414	1.000
PLATEC0.6-PLATEC1.0	.667	.414	1.000
PLATEC0.6-PLATEC0.8	.667	.414	1.000
PLATEC0.6-PLATEC1.2	6.000	.014	.300
PLATEC0.4-PLATEC0.2	.667	.414	1.000
PLATEC0.4-PLA	.667	.414	1.000
PLATEC0.4-PLATEC1.0	6.000	.014	.300
PLATEC0.4-PLATEC0.8	.667	.414	1.000
PLATEC0.4-PLATEC1.2	6.000	.014	.300
PLATEC0.2-PLA	.667	.414	1.000
PLATEC0.2-PLATEC1.0	.667	.414	1.000
PLATEC0.2-PLATEC0.8	.667	.414	1.000
PLATEC0.2-PLATEC1.2	6.000	.014	.300
PLA-PLATEC1.0	6.000	.014	.300
PLA-PLATEC0.8	.667	.414	1.000
PLA-PLATEC1.2	6.000	.014	.300
PLATEC1.0-PLATEC0.8	.667	.414	1.000
PLATEC1.0-PLATEC1.2	6.000	.014	.300
PLATEC0.8-PLATEC1.2	6.000	.014	.300

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

- a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S9: Pairwise mean values significant difference hypothesis test using Median Test results for D_{wv}.

Pairwise Comparisons of Film_group1

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.4-PLATEC0.8	.667	.414	1.000
PLATEC0.4-PLATEC0.2	.667	.414	1.000
PLATEC0.4-PLATEC1.0	.667	.414	1.000
PLATEC0.4-PLATEC1.2	.667	.414	1.000
PLATEC0.4-PLATEC0.6	.667	.414	1.000
PLATEC0.4-PLA	6.000	.014	.300
PLATEC0.8-PLATEC0.2	.667	.414	1.000
PLATEC0.8-PLATEC1.0	.667	.414	1.000
PLATEC0.8-PLATEC1.2	.667	.414	1.000
PLATEC0.8-PLATEC0.6	.667	.414	1.000
PLATEC0.8-PLA	6.000	.014	.300
PLATEC0.2-PLATEC1.0	.667	.414	1.000
PLATEC0.2-PLATEC1.2	.667	.414	1.000
PLATEC0.2-PLATEC0.6	.667	.414	1.000
PLATEC0.2-PLA	6.000	.014	.300
PLATEC1.0-PLA	.667	.414	1.000
PLATEC1.2-PLA	.667	.414	1.000
PLATEC1.0-PLATEC0.6	.667	.414	1.000
PLATEC1.2-PLATEC0.6	.667	.414	1.000
PLATEC1.0-PLATEC1.2	.000	1.000	1.000
PLATEC0.6-PLA	.667	.414	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S10: Pairwise mean values significant difference hypothesis test using Median Test results for EC₅₀.

Pairwise Comparisons of Film_group1

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC1.2-PLATEC1.0	6.000	.014	.300
PLATEC1.2-PLATEC0.6	6.000	.014	.300
PLATEC1.2-PLATEC0.8	6.000	.014	.300
PLATEC1.2-PLATEC0.4	6.000	.014	.300
PLATEC1.2-PLATEC0.2	6.000	.014	.300
PLATEC1.2-PLA	6.000	.014	.300
PLATEC1.0-PLATEC0.6	6.000	.014	.300
PLATEC1.0-PLATEC0.8	.667	.414	1.000
PLATEC1.0-PLATEC0.4	6.000	.014	.300
PLATEC1.0-PLATEC0.2	6.000	.014	.300
PLATEC1.0-PLA	6.000	.014	.300
PLATEC0.6-PLATEC0.8	.667	.414	1.000
PLATEC0.6-PLATEC0.4	6.000	.014	.300
PLATEC0.6-PLATEC0.2	6.000	.014	.300
PLATEC0.6-PLA	6.000	.014	.300
PLATEC0.8-PLATEC0.4	6.000	.014	.300
PLATEC0.8-PLATEC0.2	6.000	.014	.300
PLATEC0.8-PLA	6.000	.014	.300
PLATEC0.4-PLATEC0.2	6.000	.014	.300
PLATEC0.4-PLA	6.000	.014	.300
PLATEC0.2-PLA	.667	.414	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S11: Pairwise mean values significant difference hypothesis test using Median Test results for %weight loss.

Pairwise Comparisons of Film_group1

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLA-PLATEC0.2	.667	.414	1.000
PLA-PLATEC0.4	6.000	.014	.300
PLA-PLATEC0.6	6.000	.014	.300
PLA-PLATEC1.0	6.000	.014	.300
PLA-PLATEC0.8	6.000	.014	.300
PLA-PLATEC1.2	6.000	.014	.300
PLATEC0.2-PLATEC0.4	6.000	.014	.300
PLATEC0.2-PLATEC0.6	6.000	.014	.300
PLATEC0.2-PLATEC1.0	6.000	.014	.300
PLATEC0.2-PLATEC0.8	6.000	.014	.300
PLATEC0.2-PLATEC1.2	6.000	.014	.300

PLATEC0.4-PLATEC0.6	6.000	.014	.300
PLATEC0.4-PLATEC1.0	6.000	.014	.300
PLATEC0.4-PLATEC0.8	6.000	.014	.300
PLATEC0.4-PLATEC1.2	6.000	.014	.300
PLATEC0.6-PLATEC1.0	.667	.414	1.000
PLATEC0.6-PLATEC0.8	.667	.414	1.000
PLATEC0.6-PLATEC1.2	.667	.414	1.000
PLATEC1.0-PLATEC0.8	.667	.414	1.000
PLATEC1.0-PLATEC1.2	.667	.414	1.000
PLATEC0.8-PLATEC1.2	.667	.414	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S12: Description statistics of cohesion, color, heme-iron, odor, and TBA from DAY 0 to DAY 6

Descriptives^{a,b,c,d,e,f,g,h,i,j,k,l,m,n,o,p,q,r,s,t}

	Film_group3			Statistic	Std. Error
cohesionDAY0	CONTROL	Mean		5.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	5.0000	
			Upper Bound	5.0000	
		5% Trimmed Mean		5.0000	
		Median		5.0000	
		Variance		.000	
		Std. Deviation		.00000	
		Minimum		5.00	
		Maximum		5.00	
		Range		.00	
		Interquartile Range		.00	
		Skewness		.	.
		Kurtosis		.	.
	PLA	Mean		5.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	5.0000	
			Upper Bound	5.0000	
		5% Trimmed Mean		5.0000	
		Median		5.0000	
		Variance		.000	
		Std. Deviation		.00000	
		Minimum		5.00	
		Maximum		5.00	
		Range		.00	
		Interquartile Range		.00	
		Skewness		.	.
		Kurtosis		.	.
	PLATEC0.6	Mean		5.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	5.0000	
			Upper Bound	5.0000	
		5% Trimmed Mean		5.0000	
		Median		5.0000	
		Variance		.000	
		Std. Deviation		.00000	
		Minimum		5.00	
		Maximum		5.00	
		Range		.00	
		Interquartile Range		.00	
		Skewness		.	.
		Kurtosis		.	.
cohesionDAY2	CONTROL	Mean		4.4800	.16743
		95% Confidence Interval for Mean	Lower Bound	3.7596	
			Upper Bound	5.2004	
		5% Trimmed Mean		.	
		Median		4.4800	
		Variance		.084	
		Std. Deviation		.29000	
		Minimum		4.19	
		Maximum		4.77	
		Range		.58	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
	PLA	Mean		4.2800	.23094
		95% Confidence Interval for Mean	Lower Bound	3.2863	

		Upper Bound		5.2737	
		5% Trimmed Mean		.	
		Median		4.2800	
		Variance		.160	
		Std. Deviation		.40000	
		Minimum		3.88	
		Maximum		4.68	
		Range		.80	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
		PLATEC0.6	Mean		4.4600
	95% Confidence Interval for Mean		Lower Bound	3.7893	
			Upper Bound	5.1307	
	5% Trimmed Mean		.		
	Median		4.4600		
	Variance		.073		
	Std. Deviation		.27000		
	Minimum		4.19		
	Maximum		4.73		
	Range		.54		
	Interquartile Range		.		
	Skewness		.000	1.225	
	Kurtosis		.	.	
cohesionDAY4	CONTROL	Mean		3.8000	.11547
		95% Confidence Interval for Mean	Lower Bound	3.3032	
			Upper Bound	4.2968	
		5% Trimmed Mean		.	
		Median		3.8000	
		Variance		.040	
		Std. Deviation		.20000	
		Minimum		3.60	
		Maximum		4.00	
		Range		.40	
		Interquartile Range		.	
		Skewness		.000	1.225
	Kurtosis		.	.	
	PLA	Mean		4.1000	.14434
		95% Confidence Interval for Mean	Lower Bound	3.4790	
			Upper Bound	4.7210	
		5% Trimmed Mean		.	
		Median		4.1000	
		Variance		.062	
		Std. Deviation		.25000	
		Minimum		3.85	
		Maximum		4.35	
		Range		.50	
		Interquartile Range		.	
Skewness		.000	1.225		
Kurtosis		.	.		
PLATEC0.6	Mean		4.3200	.06351	
	95% Confidence Interval for Mean	Lower Bound	4.0467		
		Upper Bound	4.5933		
	5% Trimmed Mean		.		
	Median		4.3200		
	Variance		.012		
	Std. Deviation		.11000		
	Minimum		4.21		
	Maximum		4.43		
	Range		.22		
	Interquartile Range		.		
	Skewness		.000	1.225	
Kurtosis		.	.		
cohesionDAY6	CONTROL	Mean		2.8400	.06351
		95% Confidence Interval for Mean	Lower Bound	2.5667	
			Upper Bound	3.1133	
		5% Trimmed Mean		.	
		Median		2.8400	
		Variance		.012	
		Std. Deviation		.11000	
		Minimum		2.73	

colorDAY0	PLA	Maximum		2.95	
		Range		.22	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
		Mean		3.3200	.16166
		95% Confidence Interval for Mean	Lower Bound	2.6244	
			Upper Bound	4.0156	
		5% Trimmed Mean		.	
		Median		3.3200	
		Variance		.078	
		Std. Deviation		.28000	
		Minimum		3.04	
		Maximum		3.60	
		Range		.56	
	PLATEC0.6	Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
		Mean		3.9400	.10392
		95% Confidence Interval for Mean	Lower Bound	3.4929	
			Upper Bound	4.3871	
		5% Trimmed Mean		.	
		Median		3.9400	
		Variance		.032	
		Std. Deviation		.18000	
		Minimum		3.76	
		Maximum		4.12	
		Range		.36	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
colorDAY2	CONTROL	Mean		5.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	5.0000	
			Upper Bound	5.0000	
		5% Trimmed Mean		5.0000	
		Median		5.0000	
		Variance		.000	
		Std. Deviation		.00000	
		Minimum		5.00	
		Maximum		5.00	
		Range		.00	
		Interquartile Range		.00	
		Skewness		.	.
		Kurtosis		.	.
	PLA	Mean		5.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	5.0000	
			Upper Bound	5.0000	
		5% Trimmed Mean		5.0000	
		Median		5.0000	
		Variance		.000	
		Std. Deviation		.00000	
		Minimum		5.00	
		Maximum		5.00	
		Range		.00	
		Interquartile Range		.00	
		Skewness		.	.
		Kurtosis		.	.
	PLATEC0.6	Mean		5.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	5.0000	
			Upper Bound	5.0000	
		5% Trimmed Mean		5.0000	
		Median		5.0000	
		Variance		.000	
		Std. Deviation		.00000	
		Minimum		5.00	
		Maximum		5.00	
		Range		.00	
		Interquartile Range		.00	
		Skewness		.	.
		Kurtosis		.	.
	CONTROL	Mean		4.3000	.11547

			95% Confidence Interval for Mean		Lower Bound	3.8032		
					Upper Bound	4.7968		
			5% Trimmed Mean			.		
			Median			4.3000		
			Variance			.040		
			Std. Deviation			.20000		
			Minimum			4.10		
			Maximum			4.50		
			Range			.40		
			Interquartile Range			.		
			Skewness			.000	1.225	
			Kurtosis			.	.	
	PLA			Mean			4.5000	.05774
				95% Confidence Interval for Mean		Lower Bound	4.2516	
						Upper Bound	4.7484	
				5% Trimmed Mean			.	
				Median			4.5000	
				Variance			.010	
				Std. Deviation			.10000	
				Minimum			4.40	
				Maximum			4.60	
				Range			.20	
				Interquartile Range			.	
				Skewness			.000	1.225
	PLATEC0.6			Kurtosis			.	.
				Mean			4.6000	.02887
95% Confidence Interval for Mean				Lower Bound	4.4758			
				Upper Bound	4.7242			
5% Trimmed Mean					.			
Median					4.6000			
Variance					.003			
Std. Deviation					.05000			
Minimum					4.55			
Maximum					4.65			
Range					.10			
Interquartile Range					.			
colorDAY4	CONTROL		Skewness			.000	1.225	
			Kurtosis			.	.	
			Mean			3.9800	.16743	
			95% Confidence Interval for Mean		Lower Bound	3.2596		
					Upper Bound	4.7004		
			5% Trimmed Mean			.		
			Median			3.9800		
			Variance			.084		
			Std. Deviation			.29000		
			Minimum			3.69		
			Maximum			4.27		
			Range			.58		
	PLA			Interquartile Range			.	
				Skewness			.000	1.225
				Kurtosis			.	.
				Mean			4.1200	.19053
				95% Confidence Interval for Mean		Lower Bound	3.3002	
						Upper Bound	4.9398	
				5% Trimmed Mean			.	
				Median			4.1200	
				Variance			.109	
				Std. Deviation			.33000	
				Minimum			3.79	
				Maximum			4.45	
	PLATEC0.6			Range			.66	
				Interquartile Range			.	
Skewness					.000	1.225		
Kurtosis					.	.		
Mean					4.3500	.15588		
95% Confidence Interval for Mean				Lower Bound	3.6793			
		Upper Bound	5.0207					
5% Trimmed Mean			.					
Median			4.3500					
Variance			.073					
Std. Deviation			.27000					

colorDAY6	CONTROL	Minimum		4.08	
		Maximum		4.62	
		Range		.54	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
		Mean		2.8500	.08660
		95% Confidence Interval for Mean	Lower Bound	2.4774	
			Upper Bound	3.2226	
		5% Trimmed Mean		.	
		Median		2.8500	
		Variance		.022	
		Std. Deviation		.15000	
		Minimum		2.70	
		Maximum		3.00	
	PLA	Range		.30	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
		Mean		3.5000	.09238
		95% Confidence Interval for Mean	Lower Bound	3.1025	
			Upper Bound	3.8975	
		5% Trimmed Mean		.	
		Median		3.5000	
		Variance		.026	
		Std. Deviation		.16000	
		Minimum		3.34	
		Maximum		3.66	
		Range		.32	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
	PLATEC0.6	Mean		4.0200	.10970
		95% Confidence Interval for Mean	Lower Bound	3.5480	
			Upper Bound	4.4920	
		5% Trimmed Mean		.	
		Median		4.0200	
		Variance		.036	
		Std. Deviation		.19000	
		Minimum		3.83	
		Maximum		4.21	
		Range		.38	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
feDAY0	CONTROL	Mean		7.6569	.07208
		95% Confidence Interval for Mean	Lower Bound	7.3468	
			Upper Bound	7.9671	
		5% Trimmed Mean		.	
		Median		7.6170	
		Variance		.016	
		Std. Deviation		.12485	
		Minimum		7.56	
		Maximum		7.80	
		Range		.24	
		Interquartile Range		.	
		Skewness		1.293	1.225
		Kurtosis		.	.
	PLA	Mean		7.6569	.07208
		95% Confidence Interval for Mean	Lower Bound	7.3468	
			Upper Bound	7.9671	
		5% Trimmed Mean		.	
		Median		7.6170	
		Variance		.016	
		Std. Deviation		.12485	
		Minimum		7.56	
		Maximum		7.80	
		Range		.24	
		Interquartile Range		.	
		Skewness		1.293	1.225
		Kurtosis		.	.

feDAY2	PLATEC0.6	Mean		7.6569	.07208
		95% Confidence Interval for Mean	Lower Bound	7.3468	
			Upper Bound	7.9671	
		5% Trimmed Mean		.	
		Median		7.6170	
		Variance		.016	
		Std. Deviation		.12485	
		Minimum		7.56	
		Maximum		7.80	
		Range		.24	
		Interquartile Range		.	
		Skewness		1.293	1.225
		Kurtosis		.	.
	CONTROL	Mean		6.2575	.20872
		95% Confidence Interval for Mean	Lower Bound	5.3594	
			Upper Bound	7.1556	
		5% Trimmed Mean		.	
		Median		6.2975	
		Variance		.131	
		Std. Deviation		.36152	
		Minimum		5.88	
		Maximum		6.60	
		Range		.72	
		Interquartile Range		.	
		Skewness		-.492	1.225
		Kurtosis		.	.
	PLA	Mean		6.7373	.12161
		95% Confidence Interval for Mean	Lower Bound	6.2141	
			Upper Bound	7.2605	
		5% Trimmed Mean		.	
		Median		6.7173	
		Variance		.044	
		Std. Deviation		.21063	
		Minimum		6.54	
		Maximum		6.96	
		Range		.42	
		Interquartile Range		.	
		Skewness		.423	1.225
		Kurtosis		.	.
feDAY4	PLATEC0.6	Mean		7.1172	.07208
		95% Confidence Interval for Mean	Lower Bound	6.8070	
			Upper Bound	7.4273	
		5% Trimmed Mean		.	
		Median		7.0772	
		Variance		.016	
		Std. Deviation		.12485	
		Minimum		7.02	
		Maximum		7.26	
		Range		.24	
		Interquartile Range		.	
		Skewness		1.293	1.225
		Kurtosis		.	.
	CONTROL	Mean		5.5178	.10388
		95% Confidence Interval for Mean	Lower Bound	5.0708	
			Upper Bound	5.9648	
		5% Trimmed Mean		.	
		Median		5.5178	
		Variance		.032	
		Std. Deviation		.17993	
		Minimum		5.34	
		Maximum		5.70	
		Range		.36	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
	PLA	Mean		5.7177	.07208
		95% Confidence Interval for Mean	Lower Bound	5.4076	
			Upper Bound	6.0279	
		5% Trimmed Mean		.	
		Median		5.7577	
		Variance		.016	

				Std. Deviation	.12485	
				Minimum	5.58	
				Maximum	5.82	
				Range	.24	
				Interquartile Range	.	
				Skewness	-1.293	1.225
				Kurtosis	.	.
	PLATEC0.6			Mean	6.0976	.12161
				95% Confidence Interval for Mean	Lower Bound	5.5743
					Upper Bound	6.6208
				5% Trimmed Mean	.	
				Median	6.1176	
				Variance	.044	
				Std. Deviation	.21063	
				Minimum	5.88	
				Maximum	6.30	
				Range	.42	
				Interquartile Range	.	
				Skewness	-.423	1.225
				Kurtosis	.	.
				Mean	4.6981	.19071
feDAY6	CONTROL			95% Confidence Interval for Mean	Lower Bound	3.8776
					Upper Bound	5.5187
				5% Trimmed Mean	.	
				Median	4.6781	
				Variance	.109	
				Std. Deviation	.33032	
				Minimum	4.38	
				Maximum	5.04	
				Range	.66	
				Interquartile Range	.	
				Skewness	.271	1.225
				Kurtosis	.	.
	PLA			Mean	4.6381	.11131
				95% Confidence Interval for Mean	Lower Bound	4.1592
					Upper Bound	5.1171
				5% Trimmed Mean	.	
				Median	4.5582	
				Variance	.037	
				Std. Deviation	.19280	
				Minimum	4.50	
				Maximum	4.86	
				Range	.36	
				Interquartile Range	.	
				Skewness	1.545	1.225
				Kurtosis	.	.
	PLATEC0.6			Mean	5.1979	.15614
				95% Confidence Interval for Mean	Lower Bound	4.5261
					Upper Bound	5.8697
				5% Trimmed Mean	.	
				Median	5.2179	
				Variance	.073	
				Std. Deviation	.27045	
				Minimum	4.92	
				Maximum	5.46	
				Range	.54	
				Interquartile Range	.	
				Skewness	-.331	1.225
				Kurtosis	.	.
odorDAY0	CONTROL			Mean	5.0000	.00000
				95% Confidence Interval for Mean	Lower Bound	5.0000
					Upper Bound	5.0000
				5% Trimmed Mean	5.0000	
				Median	5.0000	
				Variance	.000	
				Std. Deviation	.00000	
				Minimum	5.00	
				Maximum	5.00	
				Range	.00	
				Interquartile Range	.00	
				Skewness	.	.

	PLA	Kurtosis		.	.
		Mean		5.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	5.0000	
			Upper Bound	5.0000	
		5% Trimmed Mean		5.0000	
		Median		5.0000	
		Variance		.000	
		Std. Deviation		.00000	
		Minimum		5.00	
		Maximum		5.00	
		Range		.00	
		Interquartile Range		.00	
		Skewness		.	.
		Kurtosis		.	.
	PLATEC0.6	Mean		5.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	5.0000	
			Upper Bound	5.0000	
		5% Trimmed Mean		5.0000	
		Median		5.0000	
		Variance		.000	
		Std. Deviation		.00000	
		Minimum		5.00	
		Maximum		5.00	
		Range		.00	
		Interquartile Range		.00	
		Skewness		.	.
		Kurtosis		.	.
odorDAY2	CONTROL	Mean		4.3200	.13856
		95% Confidence Interval for Mean	Lower Bound	3.7238	
			Upper Bound	4.9162	
		5% Trimmed Mean		.	
		Median		4.3200	
		Variance		.058	
		Std. Deviation		.24000	
		Minimum		4.08	
		Maximum		4.56	
		Range		.48	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
	PLA	Mean		4.5500	.08083
		95% Confidence Interval for Mean	Lower Bound	4.2022	
			Upper Bound	4.8978	
		5% Trimmed Mean		.	
		Median		4.5500	
		Variance		.020	
		Std. Deviation		.14000	
		Minimum		4.41	
		Maximum		4.69	
		Range		.28	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
	PLATEC0.6	Mean		4.7100	.08083
		95% Confidence Interval for Mean	Lower Bound	4.3622	
			Upper Bound	5.0578	
		5% Trimmed Mean		.	
		Median		4.7100	
		Variance		.020	
		Std. Deviation		.14000	
		Minimum		4.57	
		Maximum		4.85	
		Range		.28	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
odorDAY4	CONTROL	Mean		3.9400	.13279
		95% Confidence Interval for Mean	Lower Bound	3.3686	
			Upper Bound	4.5114	
		5% Trimmed Mean		.	
		Median		3.9400	

		Variance	.053	
		Std. Deviation	.23000	
		Minimum	3.71	
		Maximum	4.17	
		Range	.46	
		Interquartile Range	.	
	PLA	Skewness	.000	1.225
		Kurtosis	.	.
		Mean	4.2200	.15588
		95% Confidence Interval for Mean	Lower Bound	3.5493
			Upper Bound	4.8907
		5% Trimmed Mean	.	
		Median	4.2200	
		Variance	.073	
		Std. Deviation	.27000	
		Minimum	3.95	
	PLATEC0.6	Maximum	4.49	
		Range	.54	
		Interquartile Range	.	
		Skewness	.000	1.225
		Kurtosis	.	.
		Mean	4.5000	.08660
		95% Confidence Interval for Mean	Lower Bound	4.1274
			Upper Bound	4.8726
		5% Trimmed Mean	.	
		Median	4.5000	
	PLATEC0.6	Variance	.023	
		Std. Deviation	.15000	
		Minimum	4.35	
		Maximum	4.65	
		Range	.30	
		Interquartile Range	.	
		Skewness	.000	1.225
		Kurtosis	.	.
odorDAY6	CONTROL	Mean	3.5000	.05774
		95% Confidence Interval for Mean	Lower Bound	3.2516
			Upper Bound	3.7484
		5% Trimmed Mean	.	
		Median	3.5000	
		Variance	.010	
		Std. Deviation	.10000	
		Minimum	3.40	
		Maximum	3.60	
		Range	.20	
	PLA	Interquartile Range	.	
		Skewness	.000	1.225
		Kurtosis	.	.
		Mean	3.6000	.11547
		95% Confidence Interval for Mean	Lower Bound	3.1032
			Upper Bound	4.0968
		5% Trimmed Mean	.	
		Median	3.6000	
		Variance	.040	
		Std. Deviation	.20000	
	PLATEC0.6	Minimum	3.40	
		Maximum	3.80	
		Range	.40	
		Interquartile Range	.	
		Skewness	.000	1.225
		Kurtosis	.	.
		Mean	4.0500	.09238
		95% Confidence Interval for Mean	Lower Bound	3.6525
			Upper Bound	4.4475
		5% Trimmed Mean	.	
		Median	4.0500	
		Variance	.026	
		Std. Deviation	.16000	
		Minimum	3.89	
		Maximum	4.21	
		Range	.32	
		Interquartile Range	.	

TBA_DAY0	CONTROL	Skewness		.000	1.225
		Kurtosis		.	.
		Mean		.4608	.00831
		95% Confidence Interval for Mean	Lower Bound	.4250	
			Upper Bound	.4966	
		5% Trimmed Mean		.	
		Median		.4608	
		Variance		.000	
		Std. Deviation		.01440	
		Minimum		.45	
		Maximum		.48	
		Range		.03	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
	PLA	Mean		.4608	.00831
		95% Confidence Interval for Mean	Lower Bound	.4250	
			Upper Bound	.4966	
		5% Trimmed Mean		.	
		Median		.4608	
		Variance		.000	
		Std. Deviation		.01440	
		Minimum		.45	
		Maximum		.48	
		Range		.03	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
	PLATEC0.6	Mean		.4608	.00831
		95% Confidence Interval for Mean	Lower Bound	.4250	
			Upper Bound	.4966	
		5% Trimmed Mean		.	
		Median		.4608	
		Variance		.000	
		Std. Deviation		.01440	
		Minimum		.45	
		Maximum		.48	
		Range		.03	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
TBA_DAY2	CONTROL	Mean		.5868	.01157
		95% Confidence Interval for Mean	Lower Bound	.5370	
			Upper Bound	.6366	
		5% Trimmed Mean		.	
		Median		.5832	
		Variance		.000	
		Std. Deviation		.02004	
		Minimum		.57	
		Maximum		.61	
		Range		.04	
		Interquartile Range		.	
		Skewness		.782	1.225
		Kurtosis		.	.
	PLA	Mean		.5760	.00749
		95% Confidence Interval for Mean	Lower Bound	.5438	
			Upper Bound	.6082	
		5% Trimmed Mean		.	
		Median		.5724	
		Variance		.000	
		Std. Deviation		.01298	
		Minimum		.57	
		Maximum		.59	
		Range		.03	
		Interquartile Range		.	
		Skewness		1.152	1.225
		Kurtosis		.	.
	PLATEC0.6	Mean		.5472	.00624
		95% Confidence Interval for Mean	Lower Bound	.5204	
			Upper Bound	.5740	
		5% Trimmed Mean		.	

TBA_DAY4	CONTROL	Median		.5472	
		Variance		.000	
		Std. Deviation		.01080	
		Minimum		.54	
		Maximum		.56	
		Range		.02	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
		Mean		.7524	.01247
		95% Confidence Interval for Mean	Lower Bound	.6987	
			Upper Bound	.8061	
		5% Trimmed Mean		.	
		Median		.7524	
		Variance		.000	
		Std. Deviation		.02160	
		Minimum		.73	
		Maximum		.77	
		Range		.04	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
TBA_DAY4	PLA	Mean		.7116	.00937
		95% Confidence Interval for Mean	Lower Bound	.6713	
			Upper Bound	.7519	
		5% Trimmed Mean		.	
		Median		.7128	
		Variance		.000	
		Std. Deviation		.01623	
		Minimum		.69	
		Maximum		.73	
		Range		.03	
		Interquartile Range		.	
		Skewness		-.331	1.225
		Kurtosis		.	.
	PLATEC0.6	Mean		.6564	.00865
		95% Confidence Interval for Mean	Lower Bound	.6192	
			Upper Bound	.6936	
		5% Trimmed Mean		.	
		Median		.6516	
		Variance		.000	
		Std. Deviation		.01499	
		Minimum		.64	
		Maximum		.67	
		Range		.03	
		Interquartile Range		.	
		Skewness		1.293	1.225
		Kurtosis		.	.
TBA_DAY6	CONTROL	Mean		.8124	.01182
		95% Confidence Interval for Mean	Lower Bound	.7615	
			Upper Bound	.8633	
		5% Trimmed Mean		.	
		Median		.8064	
		Variance		.000	
		Std. Deviation		.02047	
		Minimum		.80	
		Maximum		.84	
		Range		.04	
		Interquartile Range		.	
		Skewness		1.206	1.225
		Kurtosis		.	.
	PLA	Mean		.8016	.00840
		95% Confidence Interval for Mean	Lower Bound	.7655	
			Upper Bound	.8377	
		5% Trimmed Mean		.	
		Median		.7992	
		Variance		.000	
		Std. Deviation		.01455	
		Minimum		.79	
		Maximum		.82	
		Range		.03	

PLATEC0.6	Interquartile Range		.	
	Skewness		.722	1.225
	Kurtosis		.	.
	Mean		.7560	.00550
	95% Confidence Interval for Mean	Lower Bound	.7323	
		Upper Bound	.7797	
	5% Trimmed Mean		.	
	Median		.7524	
	Variance		.000	
	Std. Deviation		.00952	
	Minimum		.75	
	Maximum		.77	
	Range		.02	
	Interquartile Range		.	
	Skewness		1.458	1.225
	Kurtosis		.	.

- a. There are no valid cases for cohesionDAY0 when Film_group3 = .. Statistics cannot be computed for this level.
b. There are no valid cases for cohesionDAY2 when Film_group3 = .. Statistics cannot be computed for this level.
c. There are no valid cases for cohesionDAY4 when Film_group3 = .. Statistics cannot be computed for this level.
d. There are no valid cases for cohesionDAY6 when Film_group3 = .. Statistics cannot be computed for this level.
e. There are no valid cases for colorDAY0 when Film_group3 = .. Statistics cannot be computed for this level.
f. There are no valid cases for colorDAY2 when Film_group3 = .. Statistics cannot be computed for this level.
g. There are no valid cases for colorDAY4 when Film_group3 = .. Statistics cannot be computed for this level.
h. There are no valid cases for colorDAY6 when Film_group3 = .. Statistics cannot be computed for this level.
i. There are no valid cases for feDAY0 when Film_group3 = .. Statistics cannot be computed for this level.
j. There are no valid cases for feDAY2 when Film_group3 = .. Statistics cannot be computed for this level.
k. There are no valid cases for feDAY4 when Film_group3 = .. Statistics cannot be computed for this level.
l. There are no valid cases for feDAY6 when Film_group3 = .. Statistics cannot be computed for this level.
m. There are no valid cases for odorDAY0 when Film_group3 = .. Statistics cannot be computed for this level.
n. There are no valid cases for odorDAY2 when Film_group3 = .. Statistics cannot be computed for this level.
o. There are no valid cases for odorDAY4 when Film_group3 = .. Statistics cannot be computed for this level.
p. There are no valid cases for odorDAY6 when Film_group3 = .. Statistics cannot be computed for this level.
q. There are no valid cases for TBA_DAY0 when Film_group3 = .. Statistics cannot be computed for this level.
r. There are no valid cases for TBA_DAY2 when Film_group3 = .. Statistics cannot be computed for this level.
s. There are no valid cases for TBA_DAY4 when Film_group3 = .. Statistics cannot be computed for this level.
t. There are no valid cases for TBA_DAY6 when Film_group3 = .. Statistics cannot be computed for this level.

Table S13: Overall mean values significant difference hypothesis test using Median Test results for cohesion, color, heme-iron, odor, and TBARS parameters at DAY 0, DAY 2, DAY 4, and DAY 6.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{b,c}	Decision
1	The medians of cohesionDAY0 are the same across categories of Film_group3.	Independent-Samples Median Test	. ^a	Unable to compute.
2	The medians of cohesionDAY2 are the same across categories of Film_group3.	Independent-Samples Median Test	.638	Retain the null hypothesis.
3	The medians of cohesionDAY4 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
4	The medians of cohesionDAY6 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
5	The medians of colorDAY0 are the same across categories of Film_group3.	Independent-Samples Median Test	. ^a	Unable to compute.
6	The medians of colorDAY2 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
7	The medians of colorDAY4 are the same across categories of Film_group3.	Independent-Samples Median Test	.638	Retain the null hypothesis.
8	The medians of colorDAY6 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
9	The medians of feDAY0 are the same across categories of Film_group3.	Independent-Samples Median Test	1.000	Retain the null hypothesis.
10	The medians of feDAY2 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
11	The medians of feDAY4 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
12	The medians of feDAY6 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
13	The medians of odorDAY0 are the same across categories of Film_group3.	Independent-Samples Median Test	. ^a	Unable to compute.
14	The medians of odorDAY2 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
15	The medians of odorDAY4 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
16	The medians of odorDAY6 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
17	The medians of TBA_DAY0 are the same across categories of Film_group3.	Independent-Samples Median Test	1.000	Retain the null hypothesis.
18	The medians of TBA_DAY2 are the same across categories of Film_group3.	Independent-Samples Median Test	.165	Retain the null hypothesis.
19	The medians of TBA_DAY4 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
20	The medians of TBA_DAY6 are the same across categories of Film_group3.	Independent-Samples Median Test	.165	Retain the null hypothesis.

a. All test field values are less than or equal to the median.

b. The significance level is .050.

c. Asymptotic significance is displayed.

Table S14: Pairwise mean values significant difference hypothesis test using Median Test results for TBARS parameter at DAY 0, DAY 2, DAY 4, and DAY 6.

Pairwise Comparisons of Film_group3 DAY 0

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.000	1.000	1.000
CONTROL-PLATEC0.6	.000	1.000	1.000

PLA-PLATEC0.6	.000	1.000	1.000
Pairwise Comparisons of Film_group3 DAY 2			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.6-PLA	6.000	.014	.043
PLATEC0.6-CONTROL	6.000	.014	.043
PLA-CONTROL	.667	.414	1.000
Pairwise Comparisons of Film_group3 DAY 4			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.6-PLA	6.000	.014	.043
PLATEC0.6-CONTROL	6.000	.014	.043
PLA-CONTROL	6.000	.014	.043
Pairwise Comparisons of Film_group3 DAY 6			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.6-PLA	6.000	.014	.043
PLATEC0.6-CONTROL	6.000	.014	.043
PLA-CONTROL	.667	.414	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S15: Pairwise mean values significant difference hypothesis test using Median Test results for Heme-Iron parameter at DAY 0, DAY 2, DAY 4, and DAY 6.

Pairwise Comparisons of Film_group3 DAY 0			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.000	1.000	1.000
CONTROL-PLATEC0.6	.000	1.000	1.000
PLA-PLATEC0.6	.000	1.000	1.000
Pairwise Comparisons of Film_group3 DAY 2			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.667	.414	1.000
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	6.000	.014	.043
Pairwise Comparisons of Film_group3 DAY 4			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.667	.414	1.000
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	6.000	.014	.043
Pairwise Comparisons of Film_group3 DAY 6			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLA-CONTROL	.667	.414	1.000
PLA-PLATEC0.6	6.000	.014	.043
CONTROL-PLATEC0.6	.667	.414	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S16: Correlations between thiobarbituric acid reactive substances (TBARS) and Heme iron content.

		DAY0	DAY2	DAY4	DAY6
DAY0	Pearson Correlation	1	.357	.378	.389
	Sig. (2-tailed)		.146	.122	.111
	N	18	18	18	18
DAY2	Pearson Correlation	.357	1	.997**	.997**
	Sig. (2-tailed)	.146		.000	.000
	N	18	18	18	18
DAY4	Pearson Correlation	.378	.997**	1	.997**
	Sig. (2-tailed)	.122	.000		.000
	N	18	18	18	18
DAY6	Pearson Correlation	.389	.997**	.997**	1
	Sig. (2-tailed)	.111	.000	.000	
	N	18	18	18	18

**. Correlation is significant at the 0.01 level (2-tailed).

Table S17: Description statistics of TVC from DAY 0 to DAY 6

Descriptives^{a,b,c,d}

	Film_group3		Statistic	Std. Error
TVC_DAY0	CONTROL	Mean	4.3800	.01732
		95% Confidence Interval for Mean	Lower Bound	4.3055
			Upper Bound	4.4545
		5% Trimmed Mean		

		Median		4.3800			
		Variance		.001			
		Std. Deviation		.03000			
		Minimum		4.35			
		Maximum		4.41			
		Range		.06			
		Interquartile Range		.			
		Skewness		.000	1.225		
		Kurtosis		.	.		
		PLA		Mean		4.3800	.01732
95% Confidence Interval for Mean	Lower Bound			4.3055			
	Upper Bound			4.4545			
5% Trimmed Mean				.			
Median				4.3800			
Variance				.001			
Std. Deviation				.03000			
Minimum				4.35			
Maximum				4.41			
Range				.06			
		Interquartile Range		.			
		Skewness		.000	1.225		
		Kurtosis		.	.		
		PLATEC0.6		Mean		4.3800	.01732
				95% Confidence Interval for Mean	Lower Bound	4.3055	
					Upper Bound	4.4545	
				5% Trimmed Mean		.	
				Median		4.3800	
				Variance		.001	
				Std. Deviation		.03000	
Minimum				4.35			
Maximum				4.41			
Range				.06			
		Interquartile Range		.			
		Skewness		.000	1.225		
		Kurtosis		.	.		
		TVC_DAY2	CONTROL	Mean		5.5567	.07796
				95% Confidence Interval for Mean	Lower Bound	5.2212	
					Upper Bound	5.8921	
				5% Trimmed Mean		.	
				Median		5.5600	
				Variance		.018	
				Std. Deviation		.13503	
Minimum				5.42			
Maximum				5.69			
Range				.27			
		Interquartile Range		.			
		Skewness		-.111	1.225		
		Kurtosis		.	.		
		PLA		Mean		5.2667	.09528
				95% Confidence Interval for Mean	Lower Bound	4.8567	
					Upper Bound	5.6766	
				5% Trimmed Mean		.	
				Median		5.2700	
				Variance		.027	
				Std. Deviation		.16503	
Minimum				5.10			
Maximum				5.43			
Range				.33			
		Interquartile Range		.			
		Skewness		-.091	1.225		
		Kurtosis		.	.		
		PLATEC0.6		Mean		5.0800	.02309
				95% Confidence Interval for Mean	Lower Bound	4.9806	
					Upper Bound	5.1794	
				5% Trimmed Mean		.	
				Median		5.0800	
				Variance		.002	
				Std. Deviation		.04000	
Minimum				5.04			
Maximum				5.12			
Range				.08			

TVC_DAY4	CONTROL	Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
		Mean		6.8367	.03756
		95% Confidence Interval for Mean	Lower Bound	6.6750	
			Upper Bound	6.9983	
		5% Trimmed Mean		.	
		Median		6.8400	
		Variance		.004	
		Std. Deviation		.06506	
		Minimum		6.77	
		Maximum		6.90	
		Range		.13	
		Interquartile Range		.	
		Skewness		-.230	1.225
		Kurtosis		.	.
	PLA	Mean		6.4767	.03756
		95% Confidence Interval for Mean	Lower Bound	6.3150	
			Upper Bound	6.6383	
		5% Trimmed Mean		.	
		Median		6.4800	
		Variance		.004	
		Std. Deviation		.06506	
		Minimum		6.41	
		Maximum		6.54	
		Range		.13	
		Interquartile Range		.	
		Skewness		-.230	1.225
		Kurtosis		.	.
	PLATEC0.6	Mean		6.3100	.04041
		95% Confidence Interval for Mean	Lower Bound	6.1361	
			Upper Bound	6.4839	
		5% Trimmed Mean		.	
		Median		6.3100	
		Variance		.005	
		Std. Deviation		.07000	
		Minimum		6.24	
		Maximum		6.38	
		Range		.14	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
TVC_DAY6	CONTROL	Mean		8.0400	.00577
		95% Confidence Interval for Mean	Lower Bound	8.0152	
			Upper Bound	8.0648	
		5% Trimmed Mean		.	
		Median		8.0400	
		Variance		.000	
		Std. Deviation		.01000	
		Minimum		8.03	
		Maximum		8.05	
		Range		.02	
		Interquartile Range		.	
		Skewness		.000	1.225
		Kurtosis		.	.
	PLA	Mean		7.5067	.02028
		95% Confidence Interval for Mean	Lower Bound	7.4194	
			Upper Bound	7.5939	
		5% Trimmed Mean		.	
		Median		7.5100	
		Variance		.001	
		Std. Deviation		.03512	
		Minimum		7.47	
		Maximum		7.54	
		Range		.07	
		Interquartile Range		.	
		Skewness		-.423	1.225
		Kurtosis		.	.
	PLATEC0.6	Mean		7.3567	.02603
		95% Confidence Interval for Mean	Lower Bound	7.2447	
			Upper Bound	7.4687	

	5% Trimmed Mean	.	
	Median	7.3600	
	Variance	.002	
	Std. Deviation	.04509	
	Minimum	7.31	
	Maximum	7.40	
	Range	.09	
	Interquartile Range	.	
	Skewness	-.331	1.225
	Kurtosis	.	

- a. There are no valid cases for TVC_DAY0 when Film_group3 = .. Statistics cannot be computed for this level.
b. There are no valid cases for TVC_DAY2 when Film_group3 = .. Statistics cannot be computed for this level.
c. There are no valid cases for TVC_DAY4 when Film_group3 = .. Statistics cannot be computed for this level.
d. There are no valid cases for TVC_DAY6 when Film_group3 = .. Statistics cannot be computed for this level.

Table S18: Overall mean values significant difference hypothesis test using Median Test results for TVC parameter at DAY 0, DAY 2, DAY 4, and DAY 6.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig. ^{a,b}	Decision
1	The medians of TVC_DAY0 are the same across categories of Film_group3.	Independent-Samples Median Test	1.000	Retain the null hypothesis.
2	The medians of TVC_DAY2 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
3	The medians of TVC_DAY4 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.
4	The medians of TVC_DAY6 are the same across categories of Film_group3.	Independent-Samples Median Test	.043	Reject the null hypothesis.

- a. The significance level is .050.
b. Asymptotic significance is displayed.

Table S19: Pairwise mean values significant difference hypothesis test using Median Test results for TVC parameter at DAY 0, DAY 2, DAY 4, and DAY 6.

Pairwise Comparisons of Film_group3 DAY 0

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.000	1.000	1.000
CONTROL-PLATEC0.6	.000	1.000	1.000
PLA-PLATEC0.6	.000	1.000	1.000

Pairwise Comparisons of Film_group3 DAY 2

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.6-PLA	.667	.414	1.000
PLATEC0.6-CONTROL	6.000	.014	.043
PLA-CONTROL	.667	.414	1.000

Pairwise Comparisons of Film_group3 DAY 4

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.6-PLA	6.000	.014	.043
PLATEC0.6-CONTROL	6.000	.014	.043
PLA-CONTROL	6.000	.014	.043

Pairwise Comparisons of Film_group3 DAY 6

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLATEC0.6-PLA	6.000	.014	.043
PLATEC0.6-CONTROL	6.000	.014	.043
PLA-CONTROL	6.000	.014	.043

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

- a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S20: Pairwise mean values significant difference hypothesis test using Median Test results for COHESION parameter at DAY 2, DAY 4, and DAY 6.

Pairwise Comparisons of Film_group3 DAY 2

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
PLA-PLATEC0.6	.667	.414	1.000
PLA-CONTROL	.667	.414	1.000
PLATEC0.6-CONTROL	.667	.414	1.000

Pairwise Comparisons of Film_group3 DAY 4

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.667	.414	1.000
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	.667	.414	1.000

Pairwise Comparisons of Film_group3 DAY 6

Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	6.000	.014	.043
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	6.000	.014	.043

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .050.
a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S21: Pairwise mean values significant difference hypothesis test using Median Test results for COLOR parameter at DAY 2, DAY 4, and DAY 6.

Pairwise Comparisons of Film_group3 DAY 2			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.667	.414	1.000
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	.667	.414	1.000
Pairwise Comparisons of Film_group3 DAY 4			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.667	.414	1.000
CONTROL-PLATEC0.6	.667	.414	1.000
PLA-PLATEC0.6	.667	.414	1.000
Pairwise Comparisons of Film_group3 DAY 6			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	6.000	.014	.043
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	6.000	.014	.043

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .050.
a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table S22: Pairwise mean values significant difference hypothesis test using Median Test results for ODOR parameter at DAY 2, DAY 4, and DAY 6.

Pairwise Comparisons of Film_group3 DAY 2			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.667	.414	1.000
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	.667	.414	1.000
Pairwise Comparisons of Film_group3 DAY 4			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.667	.414	1.000
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	.667	.414	1.000
Pairwise Comparisons of Film_group3 DAY 6			
Sample 1-Sample 2	Test Statistic	Sig.	Adj. Sig. ^a
CONTROL-PLA	.667	.414	1.000
CONTROL-PLATEC0.6	6.000	.014	.043
PLA-PLATEC0.6	6.000	.014	.043

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .050.
a. Significance values have been adjusted by the Bonferroni correction for multiple tests.